THE HORTICULTURIST

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Special Contributions.

A Visit to Parsons' Nurseries.

BY J. H.

The old nursery establishment of Parsons & Co., at Flushing, Long Island, has for very many years enjoyed a reputation for rare trees and plants, second to none other in the Union.

Young men looking forward to entering the pursuit, have made this the Mecca of their journeyings; and older men who have grown gray in the trade, have not thought it beneath their notice as well.

Within the last few years, the old firm, increased by the addition of younger members of the family, have thought it expedient to separate, and form two distinct establishments, each of which are presided over by one of the original members.

During a late visit to Kissena, the site of the nursery owned by S. B. Parsons & Sons, the writer saw so much to admire in the stock of entirely new plants, that he felt a desire to direct the attention of all who feel an interest in arboriculture to this beautiful collection.

The grounds present an air of newness to the visitor, not at all in keeping with the rarest of novelties that abound here on every hand; but as the work of improvement was going briskly on, future visitors will, beyond a doubt, find the gardener's skill fully adequate to the situation.

Almost the first thing that strikes one's eye, upon entering the grounds, is a fine block of specimens of the rarer Conifers, among which was a large stock of the *Golden Retinispora*. It has proven entirely hardy and reliable here, as it has in many other places. Curious forms of the common hemlock were very attractive, especially *Abies Canadensis pendula* of Sargent, one of the most lovely of drooping Conifers. A small leaved variety called *A. Canadensis macrophylla* with foliage almost like a Heath, was very conspicuous; as well as the deep green stout form known as *A. Canadensis macrophylla*. The dwarf varieties of the well known Norway Spruce were represented by

splendid old specimens, spreading over the ground for a considerable distance, although but a few inches in height; the choicer kinds were *A. excelsa Gregoryana*, and *A. excelsa nigra pumila.* These are invaluable for cemetery lots, and for grouping on the lawn near the residence. *A. excelsa elata* was raised by the proprietors, and really resembles the unique Chilian Pine or *Araucaria;* having same peculiar spreading habit, but it is undoubtedly more graceful. *A. excelsa conica* is unsurpassed for its compact conical form, and bright green hue; somewhat dwarf in growth, and consequently adapted to the smallest collection. *A. excelsa inverta*, although not especially striking when young, becomes emphatically so with age; having the pleasing drooping tendency, so admired in all Conifers.

Among Firs, here as elsewhere, the *Nordmann's Silver Fir* is decidedly the most valued; its hardiness and entire reliability are unquestioned, to which is added a remarkable beauty.

The Common Silver Fir is represented here by two excellent forms, one, the *Weeping Silver Fir*, and the other, a dwarf dense bush called *Abies pectinata compacta.* The first of these has an awkward manner of growth, but when properly trained during its younger years, it makes a remarkably handsome tree. The *Noble Silver Fir* does well here, and so do the various forms of *Abies grandis.* But we are lingering too long among these fascinating evergreens.

Adjoining this block of fine specimens, is a suite of cold-frames well filled with the largest collections of Japanese plants to be found,—not only in the United States, but in Europe as well. They were sent home by that indefatigable collector Thos. Hogg, now a resident of Japan. It would be useless to undertake a description of these elegant novelties in a condensed article like this, for really the diversity of forms as here displayed, seemed indeed endless.

The feature of all others most beautiful in our eyes, were the elegant *Maples;* some with laciniated leaves, so finely and evenly cut as to resemble a green fringe; others again were tinted with the most lovely combination of colors, white, yellow and pink being in many instances prettily blended together. The all-absorbing question at this place, is, will they prove reliable? We have been skeptical heretofore, very, but plants here in the open ground look so well, that we feel like changing our opinion somewhat. *Dogwood, Celtis, Oaks,* in fact almost every genus is here dwarfed, or variegated, or cut-leaved, or curled-leaved, or gotten up to suit the taste of the searcher after novelty in plant-life.

We pass on to the strictly nursery portion of the collection, and here we find hundreds of *Rhododendrons*, looking not so well as in former years, owing to recent removals, with two or three terribly hard winters and summers to contend against.

But this enterprising old firm don't understand the meaning of "fail" in Rhododendron culture, and we predict visitors, during the next two or three years, will find everything in this department looking as healthy as of old. Large blocks of *Purple Beech, Magnolias* (including two or three new hybrids from Japan), a new *Weeping Elm, Hemlock, Spruce, Siberian Arbor vitæ*, gave evidence that our commissioners of parks need not send abroad for fine specimens to decorate their grounds. Republics are ungrateful in one sense at least, as they do not seem to appreciate the labors of the few gentlemen who are endeavoring to introduce a new series of trees and plants. The Messrs. Parsons are at times discouraged, as are their contemporaries in the same line of business, but our advice is, to persevere in the good work, and the reward will be sure to come in the end.

A large specimen ground has been recently laid out and partially planted, for the purpose of testing all the novelties as they appear; a praiseworthy undertaking, it strikes us, and one that will prove highly beneficial to the uninformed planter.

After following a winding walk through an adjacent piece of woodland, we came suddenly upon a cleared space, where were growing the

young plantation of Rhododendrons, numbering many thousands, all in the finest state of health,—the soil and location being just suited to their development.

Retracing our steps, we concluded our visit by an examination of the complete greenhouse department, but as a full description of this admirable arrangement has been given to the public more than once, we shall not undertake a repetition, but confine our remarks to the plants contained therein, that were especially interesting. The large Camellia house was filled with choice specimens two or three feet in height, all neatly fastened to stout stakes, a method of training too often overlooked in this class of plants, hence the numerous straggling bushes one so frequently notices in many houses. A rare collection of seedlings were just showing themselves above the surface of the soil in numerous pots, the result of an extensive importation from Japan; which embraced several species of Conifers that have proven reliable here.

A house devoted to Ferns, under the especial care of one who has made this class of plants a specialty, showed conclusively that his heart was in his work. Each individual plant, and there were many hundreds here, was as clean and healthy as any we have ever beheld. The *Citrus* family is one of the features of this establishment, for if our memory serves us aright, there were in course of propagation, one hundred and fifty varieties. Whole tables were filled with the tiny grafts, looking green and thrifty. It is needless to particularize the Azaleas for which this firm is so justly famous. These were here by the thousand, both tender and hardy. Of the latter, we passed frame after frame filled with remarkably luxuriant plants. Surely we need not send abroad for this magnificent genus. Before closing our remarks we wish to allude to one of the most showy features in the outdoor collections: it is the immense stock of variegated-leaved *Arundo*. Thousands of plants with their long maize-like leaves, ribboned with white, pale yellow, and the least tint of pink, were spread out before us in a manner we had never before witnessed.

The Greenhouse.

Greenhouse for September.

IF any repairs are yet required, no time must be lost in getting it finished, for some of the most tender plants will soon require to be housed; for after the twentieth of this month we may expect night frosts at any time; and although it seldom continues frosty more than a night or two at this time, it is sufficient to check tender plants and prevent their blooming satisfactory. This is the best season for greenhouse painting, especially outside. If any requires attention, it should be proceeded with without delay. It is a mistake to postpone painting until the wood is exposed to the action of the weather, for the wood decays very quickly, and every shower gives a deluge of drip inside, which is not only very unpleasant, but does much injury to delicate plants. We do away with drip to a great extent by having the sash bare and rafters grooved; but this is intended to catch the condensed moisture, and not expected to prevent drip from a leaky roof. As fire will now be necessary in warm houses at night, the fire-places, etc., should be in good condition for the winter's work, and a store of coals provided for the season, if there is room to store that quantity. It is seldom that coals are cheaper than at this season, and cartage, etc., is as reasonable now as at any time.

Bouvardias are seldom safe outside after the third week of this month, for we find the least frost prevents the plants flowering satisfactory, although the plants may not show any bad effects at the time. When convenient to plant out the plants on the stage, they are least trouble, and continue in flower longer; but if the plants are required for decorating other houses or rooms when in flower, it is necessary to grow them in pots. Six or seven-inch pots are usually large enough, if they are watered when necessary. If the soil is very dry, they should receive a good soaking of water the day previous to taking up; but generally it is possible to take the chance of a

good shower and dull day for this work. The soil should be made firm in pots, and receive a good soaking of water, be kept rather close and shady for a few days, giving plenty of air at night, and sprinkle the foliage frequently on bright, dry days, until the plants are established, which will be but a few days if taken up carefully. In lifting these kinds of plants, have soil and pots in readiness, and take up but few at a time, not to have the plants lying about any longer than possible; and they are best taken up in dull weather, or in the morning and evening. They do not suffer so much as when lifted during a bright, dry day.

Carnations and Chrysanthemums.—The above remarks will also apply to these, but it is not necessary to lift them until the end of the month. But it is not wise to allow a sharp frost on Carnations, or to postpone lifting them too late in the season, for the plants do not become established so soon as when taken up earlier.

Pelargoniums, if not yet shaken out from old soil, must be seen to at once. Trim away the long straggling roots, and repot in about two sizes less pots than those the plants were growing in during summer. The plants must not be overwatered, and have abundance of air day and night, with slight shade from bright sun.

Calla Lilies must be turned out of pots, and all the old soil and offsets removed. Repot in from five to seven-inch pots, according to the size of tubers. We find a seven-inch pot is large enough to give abundance of the largest sized flowers, if the soil is good and abundance of water given when the plants are in full growth. Not that the Calla is particular as to soil, but a good, stiff loam, with a free mixture of decayed manure, is best. A pinch of soot in the bottom of pots is useful; it prevents worms from being troublesome, for although one of our lady correspondents considers worms useful in pots, very few cultivators will be of the same opinion, and we should certainly recommend their absence.

Roses.—Any pot plants requiring a larger pot should be attended to at once, if the plants are required for forcing. Those not requiring potting should receive a top dressing of good soil and manure. Any dead and weak shoots should be cut away, and the plants be plunged when heavy rains can be turned off, and the plants kept rather dry, to prevent a soft late growth. Those plants which are planted out in the greenhouse should be trimmed through and surfaced with good, rich soil.

Seedling Cinerarias and Calceolarias must be placed in a cool, moist frame. If allowed to become dry, or the plants are in a hot, dry place, insects will be very troublesome. Give larger pots when necessary, using a rich, heavy soil; it retains the moisture better than a light soil.

Chinese Primulas will be growing fast, and require careful watering, but a more liberal supply will now be required if the plants are well rooted.

Poinsettias and Euphorbia Jacquiniflora, if outside, will require housing at once. Give abundance of air days and also warm nights. When it promises for a cold night, the air should be taken off, unless there is fire in the house, which will soon be required for many stove plants, and by the end of the month for these.

Geraniums for winter blooming should be placed under glass, or at least where they can be protected from heavy rains, but be well exposed in fine, bright weather. The blooms should be pinched off until the middle of next month; the plants will bloom much better for doing so. These plants require plenty of room, for if crowded together, many of the principal leaves will drop off.

Caladiums must now be gradually dried off, but do not discontinue watering all at once. Some of the later growing plants may be allowed to grow for a time longer, if room can be spared. The bright foliage is useful in the early autumn, when pot flowers are rather scarce; but it is not wise to continue these plants in bloom too late in the fall. The roots do not keep so well, or start into growth so readily in the spring.

Alocasias are evergreen, and should have water enough to keep the roots active through

the winter; for if the foliage is allowed to entirely decay, the roots will rot, and if the plant does not die outright, it is a long time starting, and the growth is weak and poor. Plants of Alocasias and Caladiums which have been planted in the open ground for summer decoration, must be taken up before any frost, or the bulbs will be sure to decay. The principal leaves may be cut off, and the roots laid in sand in a warm place. A temperature of 60 deg. will preserve the dry roots in good condition, if they receive an occasional sprinkle, but not enough to make the soil very wet.

Cannas can generally remain in the ground until the end of this month in this latitude, but it is not wise to allow a very sharp frost on the foliage before taking up; the roots do not keep so well. A cellar which will keep potatoes in good condition will preserve Canna roots well; but if very dry, the roots are best laid into sand, ashes or moderately dry soil. Those varieties which make but little tuber should have a part of the foliage left on the plants, and be placed close together into boxes, and be allowed a little light, or they are very liable to decay. We will give a short descriptive list of a few of the fine new varieties in an early number, for many of these are very fine, both in flower and foliage.

Tuberoses.—Some plants must be lifted for winter blooming before the end of the month. If there is room to spare, a few of those which are commencing to show the flower stems will bloom nicely if carefully taken up and potted in seven or eight-inch pots. These would flower well in a cool greenhouse, but later plants, which are required to bloom at Christmas and later, will require a good, warm house, and do best planted out on the benches, where a bottom heat of at least 75 deg. can be given. The plant will take quantities of water at the roots, and also over the foliage as often as possible, for red spider is often troublesome if grown in a dry house.

Camellias.—Plants which have been outside must be housed before the end of the month. Continual heavy rains will sour the soil and cause some of the buds to drop, if the plants are not in first-rate order. Wash the pots and clean the surface of soil, giving a sprinkle of fresh sandy soil; but care must be taken that the surfacing does not deceive the eye in watering, for large Camellias in pots require a large quantity of water at all times. Plants in the open border will not require frequent watering, but give sufficient to thoroughly moisten all the soil at each watering. One of the most frequent causes of the buds dropping is becoming dry in the ball, when the soil is apparently moist enough. If the plants make an early growth, a few flowers will commence to open and will be useful at this season; but in giving an occasional washing over the foliage, the water must not be allowed over the flowers.

Azaleas will have set their buds, and must be kept cool. These plants will not require so frequent watering as when in full growth, but must have good soakings when dry. See that thrip does not become established. Now the plants are in a drier atmosphere, an occasional good dash with the hose or syringe will keep it in check, and do much to prevent attack; but if a few leaves are infested, it should be sponged with tobacco water. Young plants and any others which it is desirable to make a second growth, must be kept hot and moist, or the growth will not mature in time to set the buds. We are more than ever convinced of the folly of turning young Azaleas out of doors. By obtaining a few of such plants of a variety we wished for propagation, the plants were so hard that they refused to grow at all under the same treatment as our own stock; and being short of stocks for grafting, we also tried a few hundred of those treated to the outside system; and although most of the grafts united fairly well, the stocks continued to die through the summer, and those which are alive do not make half the progress which those on our own stocks do, and will probably remain the hard, slow-growing plants of which we see so many about the conntry. No doubt, when the plants are planted out, either in frames or open ground, and shaded, and not neglected for water in dry weather, care being also used that weeds

do not become a harbor for insects, the plants will then make a satisfactory growth; but it is a question if it is not less trouble to keep the plants in pots, and they are certainly more under the eye.

Heaths will require extra attention at this season, for mildew is often troublesome on delicate varieties, and if not dusted with sulphur on its first appearance, will kill the plants in a few days. We would advise amateurs to commence with the hardy free-growing varieties, and increase their collections when they gain some experience of the requirements of the plants, and a moderate amount of success with those first tried. This is a class of plants which must not be left to the tender mercies of the average generally useful gardener; for although, with proper attention continually, the plants are easy enough of cultivation, they must not be left to take care of themselves for a few days at a time, while other more pressing things are attended to. This is one reason that these plants have so generally gone out of cultivation during the last twenty years in England. Previous to that time the extensive bedding-out system was in its infancy; also furnishing rooms with plants and table decoration with plants was unknown. Now all these things must be attended to with, in but few instances, any increase of assistance; and the days are no longer, so that something must be neglected, and it is usually the least important subject. In all large gardens, thirty years ago, a house devoted exclusively to heaths was a part of the establishment; but now the house is used for growing furnishing plants, for which purpose heaths are the worst of all subjects—not that the plants are not pretty when well grown, but a few days in a close, warm room is certain death to the delicate varieties. We have frequently used the Hymalis and Willmoreana varieties for about two days at a time for this purpose, and they often died afterwards, and always suffered much, but being free-growing sorts, are easily replaced. There is no doubt that planting out is the easiest way to manage these plants during the summer season. We saw a fair lot planted in the open garden this season, and another batch planted in a shaded pit, doing very well; but a batch which, from want of time, had not been planted, had about ten per cent. dead, and many more would die. We mention these facts to show that heath growing requires more care than there is often time to give in this country.

Orchids will have finished their growth generally, and will require more light; not that shading can be dispensed with entirely; but do not shade until later in the morning, and remove earlier in the afternoon. If the glass is painted with any mixture for shade, see that it is not too thick; for although few plants do well under glass without some shade, a thick covering, which is not removable mornings and evenings, and during dull weather, is injurious. There are less plants in flower at this season than at any other time of the year, and consist chiefly of the free-blooming Oncidiums and a few Cypripediums, with a few late Peristeria and Disa grandiflora flowers.

Orchids for Greenhouse Culture.

Read before Massachusetts Horticultural Society
BY JAMES CARTWRIGHT.

IT is a great mistake to suppose that because a plant is an orchid, it is necessarily of difficult culture.

In growing orchids, as in fact with every class of plants, there are certain rules to be observed, and these rules in the case of orchids are not difficult of application, nor hard to learn. Some orchids require a hot, moist atmosphere; others do very well with cool culture, while to some a high temperature is sure death.

While as yet our experience in orchid culture is limited, we can safely say that any one who has a forcing grapery or a rose-pit can grow many fine orchids successfully. The culture necessary for forcing roses for the market is just what is required for growing some of the choice winter-flowering orchids.

While these are always beautiful in flower, there is another aspect in which a florist can regard them—that of a profitable investment,

for they always bring good prices in the market. While the multitude are satisfied with rose buds, heliotrope and violets, there is a large and increasing class who are willing to pay liberally for the choice and beautiful, and by this class orchid flowers are appreciated.

We have been somewhat successful in growing several orchids, and purpose to give descriptions of a few of them, with notes of their culture.

Cœlogyne cristata.—This charming plant is a native of the hills of India, and does not require a high temperature. The pseudobulbs are roundish and somewhat wrinkled; the leaves long, glossy green. The flowers are pure white, with a crest of yellow, or nearly perfectly white; they are produced in drooping racemes in midwinter, and last very long in perfection. It is usually grown in a rose-pit or greenhouse. We grow them in peaty loam, mixed with crocks broken fine to keep the loam open and porous; the pot is filled one-third full of drainage. They require plenty of water in their growing season, which is from the time they have done flowering to the beginning of September, when we give them less water—only enough to keep the plants from getting dry. During their season of rest they should be kept in a cool place until their flower spikes begin to show, which will be in December. They require a sunny place to bring the flowers out.

For cut flowers this is one of the most useful of orchids, as it is desirable from its pure, rich color, and it is to be recommended for its very free blooming qualities. Very small plants will give an abundance of bloom, and as it increases rapidly, a good stock may soon be obtained from a few plants.

Lycaste Skinneri.—This very showy, free-growing plant is a native of Guatemala, and has now been in cultivation more than thirty years. It is one of the most valuable plants for the gardener, as it is easily grown, flowers freely, and the blossoms are large and very showy. They also last many weeks in full beauty, and remain in perfection long after being cut. This species, when it becomes more common, will be popular as a window plant, for it requires little heat and bears a dry atmosphere more readily than most orchids, although the plant should never be allowed to get dry, even when it rests.

The flowers are from three to six inches in diameter, the sepals and petals pure white, but varying to many shades of rose; the lip is almost covered with spots and streaks of carmine. The plant will often throw half a dozen flowers from one bulb.

The soil should be fibrous peat, but we have seen the plants doing well in common loam, with good drainage. After flowering, rest the plants until they begin to grow; then give them heat and plenty of water. Shade them from the direct rays of the sun, and as the growth matures, lessen the supply of water. This plant grows well in a forcing grapery, under the shade of the vines, or in a greenhouse that has shade.

Dendrobium nobile.—This is one of the oldest and one of the best of the Dendrobiums. It is a native of India, and indispensable in every orchid house, as it will give more blooms in proportion to the space it occupies than any plant we know.

The flower is white, shaded with lake, and with a rich purple or lake lip, and exquisitely fragrant. The plant begins to make its growth immediately after it has done flowering, and continues till late in summer. It should have plenty of water during its growth. We use a watering pot with a rose, so as to water all the plant. This we do several times a day, until its growth becomes mature, when we give less water. When the nights get colder, they require but little water, and may be exposed to the sun, but while they are growing we give them shade under some large plants of some kind.

While they are at rest, a cool place is the best for them, say about 50°, until the flower buds are well developed, which will be in the early spring. If the plants are kept too warm in winter, they start to grow and not to flower. The best soil is a mixture of peat broken in pieces about the size of walnuts, sphagnum moss, and broken crocks or charcoal. The plants should be set well up above the pot.

There are many of the orchids which can be well grown in a rose-pit or greenhouse.

Any one who will try those we have recommended will hardly be satisfied with these alone. There is no reason why the culture of orchids should not become a source not only of pleasure, but of profit.

Discussion.

Edward S. Rand, Jr., said that those mentioned are all adapted to greenhouse culture, but the number can be largely increased. Mr. Rand went on to speak of the orchids already mentioned and others, illustrating his remarks with specimens exhibited by him. The *Dendrobium nobile*, though flowering abundantly, had more than twice as many flowers two weeks ago. After the flowers had faded last year, the plant was kept in a house with the temperature at about 50° by night, and never raised above that point by fire heat, by day or night, though the sun heat raised it to 100°. The plant was liberally watered while making its growth, which it does in two ways: first, by producing young plants from the sides of the pseudo-bulbs; and second, by shoots from the base. After completing its growth, it was hung up in the full heat of the sun, and had no water until September. At about Thanksgiving time it was taken back into the orchid house. If taken in too early, the flower buds produce shoots and no flowers. If water had not been withheld, it would not have flowered at all, but would have sent out shoots and roots from every joint, which, if potted, would in a year have made strong plants. All orchids must have rest, or they will give no flowers. In their native countries there is a dry season, when they all look as if dry and dead.

The *Lycaste Skinneri* is very showy in flower, and almost imperishable. It can be grown in winter, and if kept shaded while in growth, it perfects very large bulbs, and will give fine bloom. *Cœlogyne cristata* requires about the same treatment as *Lycaste Skinneri*. It should have plenty of water. *Oncidium flexuosum* is well adapted to common cultivation.

Many orchids, if brought into the parlor when in bloom, will last in full beauty three to six weeks, and Mr. Rand exhibited a spike of *Oncidium luridum guttatum* from a plant which had been in bloom for six weeks, with more than two hundred flowers. Also a small plant of *Epidendrum machrochilum*, growing on a block of wood, as an illustration of the manner of growth of many orchids, and a fine plant of *Dendrochilum glumaceum*, which, however, is not a cool orchid, but one of the most desirable for its grace, freedom of growth, beauty of foliage, and delightful fragrance.

Cypripedium spectabile.—Mr. Rand said that though it might be grown in greenhouses, it is hardly worth while, since it does so well out of doors. It is a native of northern Maine and Canada, and perfectly hardy. He had had plants two feet high, with two or three flowers on a spike. It does well in peat soil; there is no better place for it than in a Rhododendron bed, and it should have plenty of water in summer. It is the finest of all our native Cypripediums.

Cypripedium insigne and *C. venustum.*—C. M. Hovey said: Pans are better for these, because in deep pots they are apt to get too much water. The pans should be well drained. He saw this plan first in the garden of Mr. Lenoir, in New Jersey. He had pans fifteen or twenty inches in diameter, containing plants with one or two hundred flowers each. Orchids must have special treatment, and hence they have not come into general cultivation. In England he found the orchid houses so reeking with moisture and heat that ladies could not possibly enter them. Cool orchids from Mexico will grow in greenhouses which are accessible to ladies.

Mr. Cartwright said that the treatment of cool orchids is very simple: give plenty of water and heat in the growing season. Keep *Dendrobium nobile* in a cool place, and you will always retain the foliage. Through the dormant season he keeps them on a bed of slightly moist sand.

Among the orchids which can be grown at all times is the *Phaius grandifolius*, which is as easily cultivated as the Calla. The *Cypripediums—venustum, insigne* and *barbatum*—are also easily grown in the greenhouse. He did not feel, as many do, that the yellow color of the *Oncidiums* was an objection. He would have a portion of yellow in every bouquet.

Garden Gossip.

Suggestive Notes.

As we write, our summer's flowers are in all their glory; the "foliage-plants" have assumed their gaudiest tints, the Dahlias, Gladiolus, and late-blooming varieties, are just opening out their flowers, while Verbenas, Petunias, Phlox Drommundi, etc., are still as showy as ever. It is in brief the height of the season, and consequently just the proper time to note the errors of commission and omission, so as to rectify them in the future. The gardener who cannot see where improvements can be made, where different plants may be wisely substituted, or more reliable species made use of, had far better change his business,—he has gotten beyond the horticulturist's most valuable blessing—the pleasure of learning something new. Indeed this "change of base" every season constitutes one of the greatest charms in the pursuit. We tire of the same arrangement, and of the same set of plants; in fact we feel inclined to change every thing about our place, excepting the grand old trees, and they seem to grow in beauty with each succeeding year. In many sections of the country, this has been a peculiar season; very dry early in summer, followed by copious rains ever since. The consequence has been that our bedding plants have had a hard struggle for existence. Now, however, they are looking finely, excepting those which are rotting from an excess of moisture. Among the best is the

Coleus for Show.—Looking over an extensive collection lately, we were delighted to find a large plant of "*the Shah*" splendidly tipped with yellow on a crimson ground. It is, however, too variable for general use. The old standard kinds, *Princess Royal*, *Golden Gem* and *Verschaffelti*, are doing equally as well as ever before. Even *Beauty of Widmere*, which has not been recommended for bedding, is this season a marvel of beauty. The foliage appears flecked all over with tiny dots of yellow, white and pink, which added to its multiplicity of leaves, make it remarkably conspicuous. *Nellie Grant*, of the Philadelphia florists, is very golden and very beautiful, although it is another of the variable varieties that usually will not stand the sun. Whoever wants a real dark leaf for contrasting with the golden tints, should select *Columbia;* it is not brilliant, but simply very deep in hue.

Harrisii is one of the newer kinds, deep velvety crimson with a distinct yellow border. It is looking exceedingly brilliant at present. An old variety called *Laciniata*, with a bad reputation for out-door work, is this season one of the most showy. Its deeply cut leaves are elegantly dotted.

What have we after all that will exceeed the Coleus for brilliancy in bedding?

White-leaved Plants.—The excessively wet weather is leaving its mark on this useful class. Early in the summer they were especially fine, but the rains descended, and they did also. Now, after one has gone to no little expense and trouble to produce a beautiful effect on the lawn, or in the garden, to have unpropitious weather destroy the symmetry of our plans, is, to say the least, very provoking. Still white-leaved plants are an absolute necessity,—we cannot get along without them.

The best, although too strong a grower for all situations, is *Glaucium corniculatum*. Its beauty is enhanced by its peculiar grace, the leaves curve so evenly one over the other.

The next in point of excellence is *Centauria gymnocarpa;* a plant combining grace, silvery-whiteness, and a good reputation for reliability in out-door bedding. Alas, however, for this year; as it has blighted badly.

The various *Cinerarias* have done no better, and even *Artermisia stellarina* has followed suit in the general devastation.

The hardy *Stachys lanata*, that we thought nothing would injure, quite suddenly melted down as if it had received a sprinkling of boiling water. Our hopes too were centered on a beautiful ribbon of *Gnaphalium lanatum variegatum*, but it, as well as its near relative, *G. tormentosum* are looking too sick ever to recover.

But we are not discouraged, and by the time our beds are prepared next spring, these white-leaved plants will be just as popular as ever. One failure is not a certain test of the value of any class of plants.

Ornamental Vines.—We need more variety in our coverings for arbors and trellises, and it is not necessary to hunt over foreign catalogues to find such as will meet our requirements either.

There is the good old-fashioned Passion-flower (*Passiflora incarnata*), a native too, which cannot be excelled for beauty at this particular season. An old well-established vine will throw up numerous shoots, all bountifully supplied with foliage, and as we write, almost covered with its gay blossoms. Its near relative, the small yellow Passion-flower (*P. lutea*), another native as well, is a delicate little climber, with very pretty round-lobed leaves, and tiny little greenish-yellow bloom. It is neat, effective, and grows thriftily. Just now our staff-tree (*celastrus scandens*), is gorgeous with its orange-colored pods opening out, and disclosing to view the scarlet-covered seeds within. It is hardy, grows rapidly, and is exceedingly pretty, when in fruit.

The Grecian Periploca (*P. Græca*), will clamber to the tops of the tallest trees, and its brownish purple are quite ornamental; and then, too, it is so reliable that, when once established, we are forever after loth to give it up.

We might mention many more, but try the above first, and then, like Oliver Twist, if more should be needed, ask.

Perennials for Autumn.—The *Compositæ* are now in their glory. The *Asters*, just opening their flowers, are among the very best, and foreign gardeners think what unappreciative people those Yankees are, when nature has done so much for them, and men appreciates her endeavors so little. A collection of Asters are very beautiful; make a note of this, all who are skeptical.

The *Rudbeckias* are showy with their great flaunting yellow flowers, lasting until frost serves all alike.

Some of the *Eupatoriums* (especially *E. ageratoides*), we might say all, in fact, make a fine show.

The great coarse-growing *Vernonia Noveboracensis*, peeping up out of a group of shrubbery with its large cymes of purple flowers, is by no means to be despised. The *Liatris* family are every one handsome garden plants, that need only to be known to be highly appreciated. Even the *Golden Rods* are taking on a tinge of yellow, a reminder of the rich golden hue that will assuredly follow. Out west, the various species of *Rosin-Weed* or *Silphium* are gaudy, when in bloom, and their very coarseness is made an element of beauty, when associated with other so-called sub-tropical plants. Very many of the native *Sun-flowers* or *Helianthus* make excellent garden plants, and, though coarse in growth, the bright yellow rays of their flowers are very showy.

Shrubbery Cuttings.—Many amateur gardeners desire to increase their stock of flowering shrubs, but are unaware of the methods employed by professional florists to accomplish it. Just now is the best time, as the young wood is commencing to ripen, and before it gets too hard. Make a small heap of manure of sufficient size to receive a frame covered by a single sash. Shake the manure well and beat it with the back of the fork as the work progresses; two feet high will be sufficient. Place on the frame and heap around it to the top with more manure. Fill inside, say two inches deep, with spent tan-bark, sprinkle, and wait until the heat sinks to 95°. The sash should be raised slightly all the time to allow the rank steam to pass off.

Make the cuttings about three inches long, allowing only two leaves to remain on at the top, and trim these to one-half their length.

Have prepared shallow boxes with holes in the bottom, put in an inch of drainage, fill up with pure sand, and pound it firm. With a sharp-pointed stick perforate the sand, stick in the cuttings, and press the sand lightly against it. When filled, sprinkle well, and place on the hot-bed. Regulate the heat by a thermometer; from 75° to 95° being the limits. Syringe slightly once each day, but

do not water much, and only when absolutely necessary. When rooted, put off into good rich soil.

A New Shade Tree.—We do not mean new to science, but new to our planters of ornamental lawns; and yet in many sections of our country it is quite common growing wild; we allude to the *Nettle-tree* (Celtis occidentalis). A near relative to the Elm, and not unlike it in general appearance, it has the advantage of the latter in producing edible fruit. True, these drupes are pretty much all seed, but the very sweet skin is pleasant to the taste, and carries us in memory back to our childhood days when we desired nothing better. In suitable soils it will form quite a large tree, and we know of a fine old specimen now standing in the yard of a noted botanist, together with a plant of its rough-barked variety (crassifolia), than which nothing in the vicinity can surpass them.

The common names of Sugar-berry and Hackberry are quite expressive, and we hope soon to see them in our nurserymen's lists, among other valuable native trees.

Special Fruits.—The practice of growing single varieties of fruits as specialties, is open to some objections, and has many excellent features to recommend it to cultivators. It is objectionable because the ripening season causes a multiplicity of work at one time, and if this should happen during the summer or early autumn, at a season when fruit will not keep sound for any length of time, a portion of the crop must be lost.

Then again, should the market be overstocked at that particular time with other fruits, no amount of care will preserve them for better times: they must be sacrificed.

But on the other side of the question there are so many practical advantages to be gained by selecting one reliable, popular kind, that we believe many of our fruit growers are gradually adopting it as the best system.

For instance, in some sections of Pennsylvania, peach growers have selected the Crawford's Late, and planted large orchards of it alone; and as it ripens there, after the same variety in Delaware and Maryland have been exhausted, the consequence is the market is comparatively free for a first class peach to rule. Other facts in connection with the increased size and appearance of the northern specimens also add additional weight in its favor, and the result proves that by concentrating all the capital on this alone, a larger per cent of profit has invariably arisen.

Take also, as an example, the Smith's cider apple, a variety that is pleasant and juicy, but very far from first class, but which owes its great popularity in some sections to its immense crops of showy fruit regularly every year.

In Bucks county, Pennsylvania, as well as in the western states, we find the men who have planted it alone for market, are among those who are making the most money from fruit. And why? From the simple reason that they have selected in the first place an apple that they know will always do well in their special locality, and so have centered all their labor on it alone, instead of clogging their operations with dozens of kinds, better flavored to be sure, but which will only produce well once in awhile.

This same rule works well with small fruits also. One acre of Wilson's Albany strawberry will pay a far larger profit, than if several kinds had been planted on the same ground.

This is not mere theoretical reasoning, but the result of actual experience, aided by close observation for many years.

They have a way in California of counting up their profits so as to nearly take away one's breath. One of the latest accounts in the fruit line, tells about orange culture, and the immense returns from this branch of industry.

Near San Gabriel is an orange orchard of five acres, and it contains 500 trees. From this grove the owner sold last season, $15,000 worth of fruit, the purchaser picking the crop. This we call pretty nearly clear profit, as the cultivation all told would not

greatly exceed that of a pear orchard, and three thousand dollars per acre, per annum, is a temptation that our northern fruit growers will not be able to resist, if they can make it convenient to dispose of their own blighted plantations, and so go into orange culture in the El Dorado.

What an improvement has been made of late years in the matter of dried flowers! The old-time favorites, great gaudy Marygolds and sprigs of Asparagus are no longer tolerated, excepting in those homes where the Agricultural and Horticultural papers are never taken.

The introduction of the French *Immortelles*, at once places in the hands of every person of taste, the means by which he or she can decorate the living rooms with all the bright colors of the garden. And then by the insertion of a few sprigs of ferns, grace is added to beauty, and the basket or rustic vase neatly filled needs no more attention (excepting an occasional dusting) the whole winter long.

How it makes one's mouth water to read about successful fruit orchards. A case in point is the largest plum orchard in the world, way up in Oregon. The owner, Dr. W. H. Watkins, of Portland, tells the *Country Gentleman* that he has a three-year old orchard which contains two thousand trees of the Peach Plum, five hundred of the French Prune, and fifteen hundred German Prunes.

As a specimen of productiveness in plums in this wonderful climate, the writer states that trees of the Peach Plum, twelve years old the past season, bore four hundred pounds; that every variety ever tried there, bears in abundance—the trees breaking down under their loads of fruit, and the *Curculio* unknown.

Many plants heaved by frost die when by a little timely oversight they might readily be saved. Just so soon as the frost is out and the soil begins to settle and feel firm to the foot all small plants should be gone over and pushed down to their natural position. Strawberries in some soils heave badly, and if not attended to in time will inevitably die, or at least be so much injured as to prove comparatively worthless during the fruiting season. Beds of hardy perennials need this watchful care early in spring, for not unfrequently, even if properly protected, they will be found raised up out of the soil. By waiting until the plants have made some growth one runs considerable risk in thus disturbing them; but even then it would probably be better to push them down than let them remain in a stilted position.

Jean Sisley, the eminent horticulturist of Lyons, France, announces the production of a distinct hybrid between the ivy-leaf and zonale geraniums. The habit is procumbent after the manner of the former, while the foliage and flowers resemble the latter. The truss is composed of fifteen or twenty brilliant red pips, and is remarkably distinct. As this curious variety has seeded freely, we may soon look for a distinct race of geraniums that must certainly prove valuable for bedding purposes, as well as for vases and hanging baskets. A peculiarity of this acquisition is that, as intimated, it seeds freely, while the various forms of the ivy-leaf geranium rarely produces any seed.

Several of the foreign periodicals are speaking in the highest terms of the *Abutilon Darwinii*, a novelty recently exhibited before the Royal Horticultural Society in London, by the Messrs. Veitch. Its most distinctive and valuable feature is its mode of growth, which, unlike that of the other members of the genus, is dwarf and compact. In other respects it is somewhat similar to the old *A. striatum*, although of a deeper shade of orange in the color of its flowers. It is also said to be quite precocious in its flowering, as the bloom appears when the plant is only a few inches high. Its value as a pot-plant, and for bedding purposes, where the above good qualities can have full scope, will doubtless be fully tested in our climate.

Gardening.

Geraniums—Their Culture and Varieties.

BY WILLIAM GRAY, JR.

[From a paper read before the Massachusetts Horticultural Society.]

THE subject proposed for discussion to-day is the Pelargonium, and first I shall take the tricolored section. Whoever can grow these well will have no difficulty in managing the others, and, I think I might add, all other kinds of plants requiring, as they do, perfect drainage, pots not too large, and the greatest care in watering; in fact the last point is the critical test of a gardener. A man who can water plants with judgment has little more to learn in his profession.

Tricolors have been in such demand in England that every shoot, as soon as it appeared, has been taken off for striking, and the result is that the parent stock has been enfeebled, and in many cases killed outright. The young plants go through the same process, and, until the supply overtakes the demand, and the price falls, there is no chance of getting them of any strength. In my experience, about one-half have died on the voyage here. If they arrive alive, they should be shaken out, put into small pots, which should be plunged in spent hops, and watered with extreme care until they begin to grow. If you are fortunate, in a year from the time they come you can get one good cutting from each, and these cuttings properly treated will make good plants. The imported plant, from its weakness, and from becoming hard and stunted in its early growth, cannot be depended on to make a good specimen.

In March take the cutting off, strike it in mild bottom heat, and as soon as rooted, put it in a two-inch pot, to be plunged as before. Shift it from time to time by small shifts, as the pots get filled with roots; the point can be pinched out when the first shift is made. Never let it get a check until it is time to give it rest, which will be about the middle of June; then gradually withhold water to ripen and harden the wood, and about the middle of August shake the roots entirely out, and pot in as small a pot as will hold them without much cramping. The plants are benefited by being out of doors during June, July and August, but should be kept plunged to prevent evaporation, and sashes should always be put over them in wet weather; care should also be taken that worms cannot get into the pots. Tricolors do not keep their bright color, and do well without this season of rest.

For soil I use two parts loam (pieces of sod with the grass just dead, when I can get them) in as rough a state as possible, one part thoroughly rotted manure, and one of coarse sand. I keep all soil for potting in small heaps, or in ridges about a foot high and eighteen inches wide. It has always seemed to me a mistake, after taking the pains to get the best of the top soil of a pasture for this purpose, to stack it up, as is often done, four or more feet in height in large, compact masses, that it may lose exactly the properties gained by its long exposure to air and light, which give it so much of its value.

Training should begin in the second year, and consists merely in bending down and tying the shoots close to the rim of the pot, and occasionally stopping a gross one. The centre soon fills up, and the foundation of a specimen is laid, which, with but little care, will increase in size year by year. I have found small lead weights, hung to the shoots, an effective way of keeping them down after they have grown beyond the rims of their pots. More care is necessary in tying out bronze and green pelargoniums than the tricolors, as the growth is stronger and more brittle. Here again weights are useful; by beginning with light ones, and replacing them by degrees with heavier ones, the branches are gradually brought into place without breaking. Another advantage is, that all the weights can be removed when plants are wanted for exhibition, and they can be shown without the defacing sticks and ties which often accompany them.

To sum up: in order to have good tricolors, it is necessary to start with a strong cutting,

to grow it in a night temperature of about 50° in winter, rising to 60° in the day-time by fire heat, and to 75° or higher by sun heat, with plenty of air; to give repeated small shifts; to be careful in watering and training, and to see that it has a rest of a couple of months in each year. The water should be at least as warm as the house, and ten degrees higher will do no harm. The flower buds should always be cut off as soon as they appear.

I can add but little in regard to the other classes. They need more water, rather a stronger and more firmly packed soil, and will do fairly well under treatment that would kill the more delicate tricolors. They should have their annual rest, and be shaken out and repotted, but larger shifts are safe for them. The flowering ones should be pinched from time to time, and if a full bloom is required, it will help them much to take off the flower buds until from six weeks to two months before the time at which they are wanted. All pinching of shoots should be stopped at least ten weeks before the plants are required to be in perfection.

The best golden tricolors are Achievement, Ealing Rival, E. R. Benyon, Howarth Ashton, Lady Cullum, Lady Sheffield, Lucy Grieve, Macbeth, Miss Batters, Miss Goring, Mrs. Dunnett, Mrs. Grieve, Mrs. Little, Mrs. Turner, Peter Grieve, Prince of Wales, Princess of Wales, Reynolds Hole.

The best silver ones are Eva Fish, Excellent, Lady D. Neville, Lass o' Gowrie, Mrs. Clutton, Mrs. Laing, Princess Beatrice.

The difficulty of getting a flat leaf in this class, from the fact that the green centre grows so much faster than the white edge, has seemed insurmountable; but a plant has been lately sent out by Mr. Morris which is claimed "to be the nearest approach to perfection of any yet introduced," and, from seeing it in its young state, I think the claim well founded.

The best bronzes are Black Douglas, Chieftain, Earl of Rosslyn, Emperor of Brazil, Maréchal McMahon, Mrs. Harrison Weir, Mrs. John Lee, Prince Arthur, Reine Victoria, Rev. C. P. Peach, W. E. Gumbleton, W. R. Morris.

The flowering Zonales are so numerous that it is difficult to make a selection, but the following are the best that I have tried in their respective sections:

Round-flowering scarlets—Beauty of Waltham, Cœur de Lion, Coleshill, Congress, Corsair, Diana, Emily Morland, Hospitalité Suisse, Incomparable, Lord Derby, Lord Mayo, Majestic, Mercy Grogan, Omega, Orbiculatum, Rev. A. Newby, Sir Charles Napier, Sir John Moore, Tyersall Rival, Vanguard, Vesuvius.

Scarlet, shaded with rose—Æstival, Christian Deegin, Circulator, Crystal Palace Gem, E. J. Lowe, Florence, Professor Lawson, Renown.

Scarlet, shaded with purple—Ianthe, Madame Mezard, Peabody, Shade of Evening, T. Hammersly.

Salmon scarlet—E. S. Dodwell, King of Roses, Paul Brie.

Pink—Master Christine, Mrs. Keeler, Rose Rendatler.

Salmon—Acme, Albert Grevy, Gloire de Corbeny, Madame Jean Sisley, Polly King, President Thiers.

White—Mme. F. Hoch, Mrs. Sach, White Clipper, White Princess, White Wonder.

White, with rose centres, the loveliest class grown—Alice Spencer, Madame Werle, Marguerite Panton, Miss Gladstone, Remus, The Bride.

Of Hybrid Nosegays, which have been making great strides of late, the best scarlets are Dr. Muret, Emilio Castelar, Jessica, Sunshine, Wellington.

Rose—Caven Fox, Cherry Lips, Florence Durand, Lawrence Heywood, Mrs. Masters.

Pink—Christine Nilsson, Delight, Lady Belper, M. E. Buenzod, Mrs. F. Burnaby, Pink May Queen.

It has been questioned whether much further improvement is to be expected in these various classes. It may be slower than in the past few years, but I think in the hands of such careful growers as Dr. Denny, Mr. Pearson, of Chilwell, Mr. George and many others, it is sure to come. We may never see a more dazzling scarlet than Jean Sisley, a plant of

better habit than Orbiculatum, or of finer foliage than Mme. Werle; but until these various excellencies are all combined, by careful breeding, in one variety, I think it safe to say that the limit has not been reached.

Bedding Pelargoniums.

It has been the custom in England to separate those suitable for bedding from those best adapted to pot culture, and I suppose with good reason; but if desirable there, I do not think it so here. They use largely the narrow-petaled nosegay section, of which Waltham Seedling and Violet Hill are types, keeping the round-flowering zonales and the superb hybrid nosegays for cultivation under glass. Doubtless these two kinds, with Vesta, Star of Fire and many others, will make a more brilliant show in some one week of the summer than any other class, but in our climate it is at the expense of the rest of the season. I prefer to use kinds less free, but more constant in their flowering, of which the flowers are perfect in form and color, and have found that some of the best for pots are also the best for bedding.

Orbiculatum, Sir John Moore, Coleshill, Wellington, Douglas, Pearson and Sir Chas. Napier are the best among the scarlets, and to these must be added, for large beds, General Grant. For pinks I recommend but two—Master Christine and Pink May Queen.

There are no white-flowering varieties fit for bedding, but their place is well supplied by the white-edged Albion Cliffs, which is far in advance of any yet tried by me.

In the golden-leaved section, Crystal Palace Gem still holds the first place.

Of bronzes, the Moor is the best; Harold, the Earl of Rosslyn and the Marquis of Lorne are next, but at a long interval. The others which have been tried by me, and which can stand our sun, grow too strongly and "run to green."

There are no silver tricolors worth growing for bedding. Of the golden ones, Mrs. Pollock is the best, perhaps because that kind is plentiful and cheap, and has had a chance to get some strength; partly also, I think, owing to the light color of its leaf, which enables it to stand the sun better than those with darker zones.

A single word about arrangement in planting. I think the simpler the form of the beds, the better, and that, if small, they should be filled with plants of a single kind. If large, they should have an edging of another kind, of a different color; or of a different plant, such as golden pyrethrum, variegated alyssum, or a dwarf coleus like the Emperor Napoleon.

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Irrigation of Plants by the Wick Syphon.

BY PAUL HAUQUEL.

THE Horticultural Society of Sauvie, near Havre, has published in its *Bulletin* and in the *Almanach of Practical Horticulture* an article entitled "Syphon Léchaud," the name of the apparatus which we reproduce here under the name of the *syphon-mèche* (wick syphon), which, as we shall see further, is the name which properly belongs to it. The following is the manner of forming this syphon, and the mode of using it:

Take any pot, vase or earthen vessel, bucket, etc., fill it with water, and place it at an elevation several inches above the level of the earth; then plunge in this vase an ordinary lamp wick or long strip of cloth, of which one end is in the liquid, while the other is directed to the root of the plant which we desire to water. This syphon, which is based on the well-known phenomena of capillary attraction, has not been invented by M. Léchaud; it is, on the contrary, very old, and is frequently employed in medical practice (continuous application of cold water thus applied in the surgical wards of the hospitals), in order to replace glass syphons. It acts in virtue of the same principle of capillarity which raises the oil in the wick of a lamp, and that causes liquids to penetrate wood, sponge, and the same of all bodies possessing pores sufficiently developed. When we say that this system is not the invention of M. Léchaud, we do not doubt the good faith of this savant; but what

astonishes us is, that having traveled much in America and England, he had not seen this process employed by our neighbors across the water, where it has been known in horticulture since the commencement of our century, and published in an English treatise on "National Irrigation," by William Totham, and translated in a French work, *La Bibliothèque des Proprietaires Ruraux.* From this work we extract the following: "Some years since, during a dry summer, I was led to examine what was the mode of action produced by watering plants with a watering pot, and to observe the effects on the soil and plants in their growing condition. I have observed that this method, practiced toward sunset, had generally a good effect upon all kinds of soil, and produced the next day morning an agreeable and pleasant dew or moisture upon the plant and foliage; but that, if the watering was done at a much earlier hour, that is, during the heat of mid-day, and even in the morning, it baked the earth and arrested the progress of vegetation, and even appeared to depress the vital principle. An excellent method is to stir the soil often, whether the weather be either dry or humid.

"But the best means of supplying the want of rain not being yet discovered, the difficulty was to supply the regular and successive demands of vegetation in a dry season, in replacing in a just proportion the substance evaporated from the earth. Water being the natural aliment assigned for this purpose, in its simple condition, I then had recourse to the experiment of a syphon made of twisted cotton (*coton tors*).

"I selected two melon roots placed near each other in the same soil. One was in a more flourishing condition than the other. I tried my experiment with the least vigorous, in making with candle-wick a syphon proportioned to the stem of the plant. I then placed a pot filled with water above the surface of the earth, and protected it with the end of a plank from the burning heat of the sun.

"Having moistened my syphon in order to give movement to the fluid, after the principle of a simple fountain, I attached to one end a little stone to serve as a weight to plunge the syphon in the water. I placed the other end in the soil, separating carefully the earth from the root, and giving to the syphon a spiral direction about the root; afterwards I covered it with the displaced soil. In a very short time the earth became moderately moist several inches around the roots; it remained in this condition during all the heat of the day, without baking (*brûler*) and without cracking. The syphon satisfied the needs of the plant, and no more. The freshness was sustained in spite of the evaporation; in a few days the root of the melon became flourishing, and surpassed that of its neighbor."

I have repeated this experiment, and always with the same success; it is only necessary to say that this could be done on a large scale. In reproducing this article, we have thought it might be useful to the readers of *La Revue Horticole* in acquainting them with a method of irrigation little extended among us, and which we are convinced can be utilized to great advantage.

Montiviliers, France.

Garden Pests.

THE *Gopher* will not usually touch other seeds if he can get that of the squash or melon. In fields of these, if unmolested, he will often take the seed from acres without missing a hill. The gun, of course, is some help, but the only sure remedy is to soak all of the seed in a solution of strychnine twenty-four hours before planting, and also scatter some on the top of the ground. This diet does not seem to agree with him.

Striped Bug, or *Cucumber Bug.*—After trying many methods, I find nothing so cheap and effective as to keep a close watch, and as soon as the bugs appear, scatter wood ashes over the vines, either by hand or with a dredging box made for the purpose. To the Hubbard and other winter squashes it should be applied both on the upper and under surface of the leaves. It is important to begin hostilities as soon as the bugs seem to determine up-

on a point of attack; and in order to confuse them—and it does assist greatly to distract their attention, and sometimes they quit in dismay even at this—whenever crossing the field, I find they have begun operations, I at once scatter over them fine pulverized dirt to answer until some ashes and a dredging box can be brought to the front. Employing these means with promptness, I have rarely lost an acre of vines from their ravages, though I can boast of as many billions of bugs to the acre as any man on this continent.

Cut worms.—If balls of fresh clover or other green grass be scattered throughout the field, the cut worms are said to be attracted to them and crawl into them, where they can easily be destroyed. But this cannot be entirely effective, especially on sandy land badly infested, and close watch must be kept; and whenever traces of their work are seen, they must be dug out and killed. With early tomatoes and other early crops which would justify the expense, I have saved the crop by scraping away the dirt at the surface, and applying from a pepper box Paris green mixed with flour or plaster. Under this treatment, though many plants are attacked, yet little damage is done. Tomatoes in particular, when eaten half off, do not seem to suffer much from it.

Colorado Potato Beetle.—A tablespoonful of Paris green in a ten-quart pail of water, applied with a fine rose sprinkler having but half the usual number of holes, is at once the cheapest, most effective, safe and lasting method of applying poison. Two applications usually answer for the season.

Cabbage or *Turnip Flea.*—This little pest often eats off the young plants so soon after it breaks through the surface, that if close watch has not been kept, an inexperienced person would believe the seed had never grown. An application of ashes scattered highly along the rows, at the earliest possible moment, will generally save the crop.

In extensive field culture of turnips, immediate resowing of the crop as soon as the loss is discovered, is perhaps the best course.

To be sure of cabbage plants, the only safe course is to make several sowings a few days apart.

Worm-eaten turnips are due to their growth on old soils. Ashes scattered along the rows at the time of sowing will often prevent, but new soil, not more than two years from the sod, is always to be preferred.

Woody and tough radishes occur on soils so heavy that roots have not made a thrifty growth. The early varieties should not be sown after the middle of May, but the summer sorts instead.

Lice in cabbage are usually due to a slow growth, either on account of poor soil, drouth, or other causes, and can better be prevented than cured. An application of a pinch of salt to each head often proves of service; but plenty of manure and liberal and constant use of the hoe and cultivator are the best preventives.—*Root's Garden Manual.*

Color Arrangements.—A few simple rules in the arrangement of flower beds will materially enhance the effect produced. Among these are:

1. Avoid placing rose-colored next to scarlet, orange or violet.
2. Do not place orange next to yellow, or blue next to violet.
3. White relieves any color, but do not place it next to yellow.
4. Orange goes well with blue, and yellow with violet.
5. Rose color and purple always go well together.—*Canada Farmer.*

New Rose—E. Y. Teas.—M. Eugene Verdier, of Paris, has named one of his new roses after this well known Western rose-grower, and thus describes it:

"Hardy, with short, straight shoots of a delicate green; flowers globular, very large, full, and of very perfect shape, of a rich, showy, deep cherry-red."

A Large Cucumber.—A "Marquis of Lorne" cucumber has been grown that measured *thirty-six inches* in length.

Fruit Culture.

Notes on Pears.

By CAPTAIN SNOW, to the Maryland Horticultural Society.

Seckel.—I don't think there are two varieties of *Seckel*, having seen the size nearly doubled by manuring and thinning on my own trees. Difference in soil and culture may so change the appearance and size of the fruit as to lead to this impression. A lady on a visit to the writer some years since was handed a waiter of this fruit from a tree to which had been applied a cart-load of manure the preceding winter. The fruit, gathered a week, had been placed in a wardrobe to ripen; its color was less russet and more yellow than is usual, and she exclaimed: "they were double the size of her Seckel (of which she had five or six trees in full bearing), and of a different color." Two years after this the same tree yielded six boxes of small fruit similar to other Seckel. We do not regard the fruit here as valuable for market, and it is ripe with us too early, and decays too rapidly, to be of much value even for family use. Often we cannot sell, and it is used for pickles and preserves. We might dry them whole, as the French dry pears.

Duchesse d'Angouleme.—Succeeds well both as *dwarf* and *standard* here, but the trouble is that it *ripens too early* for the New York and Boston markets. Extra fine boxes, carefully handled and skillfully marketed in New York, pay well. The trees set as dwarfs bear more than double the fruit they can mature, and unless well thinned and the trees manured, they do not recover from the shock of over-production for two years.

Bartlett.—On high, dry sandy loams, the standards do admirably here, grow well, produce early, and we don't find them subject to blight. On what some persons consider good soil for pears—stiff soils with clay in excess, or any soil not well drained—it blights badly. Taking all things into consideration, even although it has to contend with the peach market, it is one among if not the most profitable pear we can grow. In a series of years the same number of trees will produce nearly double the number of boxes of market fruit than those of any other kind, and we can afford therefore to grow it for *less money* than any other.

Sheldon.—A few trees only, in full bearing, bore very heavy crops two years since, well ripened from the tree, as Captain Snow remarks "all pears should be." A very good table pear; no experience with it in market.

Lawrence.—Healthy tree; bears well after it *once commences*, but as a market fruit with us is not valuable, simply, I presume, because the Boston people have a particular time for eating these fall pears, and those grown here come to them *not in their season.*

Howell.—A very healthy tree as standard and dwarf, fruiting quite early. One of the most beautiful in form and color of the twenty-seven kinds contained in the fruit garden and orchard. It is ripe for shipping with me at the same time with Edmonds, Belle Lucrative and Parsonage, and all are frequently shipped with Bartlett. There has been no blight with Belle Lucrative here.

Clapp's Favorite.—Good; an ugly grower after fourth year; no experience with the fruit yet in market.

Manning's Elizabeth—Not *Rogers'*.—I have a few trees on the quince and don't want any more. It is a miserable little half russet round thing, not much larger than the little Doyenne d'Ete and only a little behind it in ripening. The only use of this summer Doyenne is to give early ripe pears to the children.

Beurre Diel.—The tree grows very large and rapidly on the quince; some five or six in the fruit garden, ten years old, are nearly twenty feet high. The fruit sets full every year and all goes on well until August, when there comes some leaf and no wood blight. I don't think any of the trees have lost limbs, but the leaves turn black and drop and consequently the fruit does not mature well. There is no cracking, but a drying up and shriveling, hence the trees are of no value here.

Jaminette.—Healthy tree, beautiful in form, rapid in growth, fruits every year, about September—the second week. The pears blotch, have dark sooty spots and crack open.

Vicar of Winkfield.—Grows well; has disappointed me in bearing.

Beurre d'Anjou.—Very handsome, rapid growing trees, both standard and dwarf. Fruit very fine to eat when properly matured. No experience with it yet in market, but a friend in my county has sold it well in Boston, several times.

Beurre Superfin.—There are four trees of this kind in the fruit garden which have yielded two full crops of nearly a box each; don't remember to have ever tasted one. It has been gathered with Howell, Parsonage and Belle Lucrative, and I have not a word to say in its favor.

Louise Bonne de Jersey.—Healthy tree and good grower on its own roots and quince up to bearing, then if on quince and not thinned to about half the fruit it sets, will break the tree down very much like the neglected peach trees of farmers. The fruit with me, even when trees are thinned, is small—much smaller than I have seen in Europe or grown near Boston—and its rough, bitter, tough skin, as Captain Snow remarks, makes a poor table fruit *with skin on.* Have regarded it with so little value that all the trees I have are in process of conversion into *Hosenschenck*—Moore's White Pound. This we regard in this neighborhood as *par excellence* "the market pear." It is about eight days in advance of Bartlett. As large or larger than its competitor, smooth, turning white with a yellowish cast when ripe and sells well. The parent tree, now over forty years old, came from a nursery near Baltimore. It grows on the quince well, but none have yet failed with me on the stock. Takes its name from "Big breeches" Schenck of Pennsylvania, on whose place it originated.

Beurre Giffard.—Find, as Captain Snow states, it does not do well on quince; bears its fruit in twos and threes on the ends of the branches, and their weight causes it to bend to the earth. We regard it as *our largest very early pear*, ripe here fourth of July. I have not found it to *rot* at the core. Gathered just as it is turning, and placed in empty hives in the apiary, it has colored up and proved very enjoyable by the ladies of the household.

Flemish Beauty.—There are about twenty in the orchard of standard and dwarf; don't want any more; shed their leaves; are as naked as winter trees in August; make feeble attempts to leaf out again in September, after rains.

Beurre Clairgeau also disappointed me; four trees came into bearing quite early, and the fruit was so large and fine, twenty-five more were added with the order for Bartletts. The next year the trees began to shed their leaves when the fruit was three-fourths grown, and the fruit spotted so badly that it was unfit for market.

Swan's Orange.—Very large, coarse pear of little value here for family or market; rots at the core badly, even before ripe enough to eat. Tree blights badly—only one of the four remains.

Early Catharine.—Not quite as large as Bartlett; season about the same. I prefer Bartlett.

Boykin's June.—A very early and very good small pear, bears well and quite often profitable for shipping; originated, I believe, in Isle of Wight county, Va.

Sugar Pound.—Very large, early, coarse pear, not good for market; wants color. A healthy tree and vigorous grower.

Doyenne Boussock.—The few trees I had on quince blighted and are gone, and did this in the same row on similar soil when others were healthy. Captain Snow's remarks about blight *on seedlings*, where budded trees escape, accords with my experience—I find suckers from the roots of *healthy* Bartletts springing up some distance from the body of the trees have *blighted, been killed* during past seven winters, and I am sure, from recent thorough inspection of every tree, *there is no indication* of *blight* in the whole orchard. In the nursery there are several hundred pear seedlings, nearly all budded past summer. On cutting the stocks above the buds a few days

since, found a number of the seedlings had died since the *fall*.

In conclusion, permit me to express my entire disapproval of the proceedings of the United States Pomological Society's method of valuing or giving *stars* to varieties of fruit. Each state should have its committee of fruit growers residing in *different* sections; and *notes* on *fruit*, their success in every respect, as regards health of trees and fruit value for family and market, should be presented to the chairman for his correct written report. Such a report would be interesting and valuable. What are we to make of this? The name of a certain fruit is called a peach, pear or apple, and Mr. Smith rises, *three stars* for Virginia for the fruit named! Now, where does Mr. S. live in Virginia? In Tidewater, Piedmont county, or the Valley of Virginia? And how many fruit growers know about their stars? NANSEMOND.

Exchange, Va.

Note by Editor.—The American Pomological Society no longer give stars to fruit unless recommended by a competent committee from each state. No individual can alone order or remove a star given to any variety, and all remarks at discussions are now referred to the chairman of the general fruit committee, Mr. P. Barry, who acts according to best judgment, and is in constant correspondence with the fruit committee appointed for each state.

Fruits—Nomenclature.

Report to Western New York Horticultural Society, 1875. By CHARLES DOWNING.

Kaign's Spitzenberg and Long Red Pearmain.

HAVING been of the opinion for some time that there was an error as to these apples being identical, I have spent much time to ascertain if it was so or not, and have come to the conclusion that they are two distinct kinds, and that the fruit books so far as I know them have made a mistake in giving one a sign of the other. Downing in his second or last revised edition has fallen into the same error. The description of Kaign's Spitzenberg, except as to origin and growth of the tree, answers to that of the Long Red Pearmain, a variety known in many portions of the west under various names, but no author that I am aware of gives its origin. I have made inquiries of many pomologists and fruit growers without success, until lately a friend informed me that the Economites at New Harmony, Ind., some time after taking possession of their property, some fifty years since, discovered a strong seedling tree, near a mud-hole, bearing fine apples, and gave it the name of "Mudhole," and this is probably the origin of the Long Red Pearmain, as upon a close examination these two last appear indentical. Many years since, I obtained grafts from different persons, in various localities at the West, under the following names: Long Red Pearmain, Red Permain, Kaign's Spitzenberg, Long John, Striped Pearmain, Park, etc., all of which were in fruit the past season, and were identical, besides specimens of all the above varieties have been sent me during the past season, also Wabash Bellflower, Pound Royal of Indiana, etc., and all prove to be the Long Red Pearmain.

The following are the names to Long Red Pearmain, so far as I have been able to find out:

Red Pearmain; Kargie's Spitzenberg, incorrectly; Long John; Red Spitzenberg; Striped Pearmain; Lady Finger, incorrectly; Winter Pearmain; Long Pearmain; Red Winter Pearmain, incorrectly; Scarlet Pearmain, incorrectly; English Pearmain, incorrectly; Red Bellflower, incorrectly; Red Pippin; Red Phœnix; Pearmain; Kentucky Gillflower; Kentucky Bellflower; Sheepnose of same; Hudson Red Streak; Wabash Bellflower; Russaw; Park, not of Kansas; Mudhole; Pound Royal of Indiana.

The true Kaign's Spitzenberg is a distinct variety, and has no syns, that I know of. This apple was first described by William Coxe in his work on fruit, in 1817, also by A. J. Downing in his first edition of "Fruits and Fruit Trees" in 1845. I received grafts of this variety from the Coxe orchard about

thirty years since, which was in bearing the past season on the same grounds with Long Red Pearmain, which gave me a good opportunity for comparison, and am satisfied they are distinct.

I do not consider either Kaign's Spitzenberg or Long Red Pearmain of much value now that we have so many better kinds, the object being to correct mistakes. If I am not correct as to the history, etc., of the above two apples, will some person who is better posted give us some light on the subject?

Synonyms, January 7, 1873.

Aromatic Calville	syn. to Aromatic Carolina.
Black Spitzenburgh	Flushing Spitzenberg.
Black Ann	Black Coal.
Boston Pippin	Golden Pippin.
Belle Rose	Primate.
Conic June	Kirkbridge White.
Capps Mammoth	Gloria Mundi.
Cranberry (incorrectly)	Black Coal.
Early Washington	Sops of Wine.
Early Baldwin	Primate
English King	Alexander.
French Pearmain	Autumn Pearmain.
Flat Vandevere	American Pippin.
Highland Pippin	Primate.
Hoover	Black Coal.
Jersey Pearmain	Autumn Pearmain.
Jenkins Summer Pippin	Primate.
Large Summer Pearmain	Buckingham.
Lodge's Early	Summer Rose.
Moore's Shanty	Moore's Sweet.
Mountain Flora	Gloria Mundi.
Montgomery Sweet	Autumn Sweet Bough.
Pound Royal (incorrectly)	Lowell.
Ryerson	Primate.
Russian Hagloe	Summer Hagloe.
Shelborne Sweet	Spice Sweet.
Shropshirevine	Sops of Wine.
Virginia May	White Juneating.
Yellow May Pippin	" "
Tennessee Early Red	Early Strawberry.

Synonyms, January, 1874.

Byfield	syn. to Rock Sweet.
Broad Apple	Pennock.
Green Sweet of Indiana	Victuals and Drink.
Hoover's June	Yellow June.
Juniata	Washington Strawberry.
Jennings	Porter.
Jewett's Striped	Jewett's Best.
Kingsbury Russet	Pumpkin Russet.
Marilandica	Early Harvest.
Kentucky Gilliflower	Long Red Pearmain.
Queen of the Dessert	Newtown Spitzenberg.
Robinson's Streak	Ben Davis.
Rittner	Jackson.
Rolfe	Macomber.
Rock Apple	Lansinburg.
Red Cheek Bellflower	Ewalt.
Striped Shropshire	Sops of Wine.
Williamson	Domine.
Welch's Spitzenberg	Red Canada.
Waddell Hall	Thackley.
Washington of Maine	Washington Strawberry.
White Water Sweet	Wells Sweet.

Additional Synonyms, January, 1875.

Bonford	syn. to Pryor's Red.
Early Congress	Gravenstein.
Fox Apple	Amer. Golden Russet.
Fay's Russet	Hunt's Russet.
Farmer's Profit	Hubbardston Nonsuch.
Green Winter Pearmain	Autumn Pearmain.
Golden Russet of Mass	Hunt's Russet.
Hoover	French Pippin.
Hare	Summer Sw't Paradise.
Heike's Summer Queen	Early Pennock.
Jefferson Pippin	Rawle's Genet.
Kennebec Seedling	Winthrop Greening.
Limber Twig Russet	Golden Russet of N. Y.
Logan's Northern Pippin	Minkler.
North Carolina Vandevere	Horn.
New England Russet	Hunt's Russet.
" Golden Russet	" "
Potter's Early	Knowles' Early.
Pound's July	Large Yellow Bough.
Red Harvest	Carolina Red June.
Russet Pearmain	Hunt's Russet.
Weidner	Early Ripe.
Wakeman	Baltimore.
Yellow Summer Pearmain	Porter.

Manure for Orchards.

TREES selected for the orchard, as a general thing, should be *free growers*, but some are not naturally so; and to these the arts of culture are to be more particularly applied. If the soil is not already rich the young trees should be manured *every year* moderately in some way.

The compost of bone and ashes is excellent, supplying, as it does, potash, lime and other elements needed for fruit-producing trees. A compost of swamp muck and well-rotted barn-yard manure is also excellent to push young trees.

When an orchard begins to bear, a compost of the following proportions is recommended by good authority: "To each barrel of dry ashes put two bushels of bone dust, eight quarts of common salt, and, if obtainable, four quarts of iron scales (peroxyd of iron). These ingredients should be well mixed and the mass saturated with water in casks or tubs. Let it remain until well decomposed; then turn out, shovel over and mix with five times its bulk of good swamp muck, leaf-mould, road scrapings or a mixture of these. A bushel or less of this mixture, according to the size of the trees, evenly spread around as far as the roots extend, will cause the production of the finest, high colored, delicious fruit." This is especially intended for the apple tree; but, if judiciously applied, will have a marked effect on the pear, peach and other fruit trees.

Mulching newly planted trees is very advantageous in case of drought, and the mulch should be applied immediately after a good rain in June.—*J. Fitz, in American Farmer.*

Window Gardening.

Insects on House Plants.

IN response to numerous inquiries we purpose to give a little more in detail than we have previously done, a description of the insects particularly injurious to house plants, show the best way to prevent their attacks, and the most approved means devised for their destruction. In general, we may remark that considerable heat and dryness of atmosphere are necessary for the hatching of insects. All have noticed in cool summers, or in a season when frequent showers occur, our common grasshoppers are scarcely noticed; but if a drought happens, then they come in full force. The same principle applies to plants in the house. Those who give their plants plenty of water by syringing, spraying and bathing, will not be very much troubled with insects.

The "green-fly" every plant-raiser knows, and he knows, too, to his sorrow, how destructive it is if left to itself. The plants which this insect attacks are the softest and most succulent, and at the ends of the young shoots and the softest leaves it sucks the juices so as materially to injure the plant in a short time. The insects of this kind (*Aphis*) increase with such wonderful rapidity that Reaumur has proved that in five generations one aphis may be the progenitor of six thousand millions, and there may be ten generations in a year.

The insect inflicts the injury by means of a long rostrum or beak, through which it sucks out the juices; the rostrum, when not in use, lies inflected beneath the breast. Their bodies, at the hinder extremity, are furnished with two little prominent or knotty openings, from which exude almost continually little drops of a sweet or honey-like fluid. As they take in great quantities of sap, they would soon become gorged if they did not get rid of the superabundant fluid. The leaves and bark of plants much infested by these insects are often completely sprinkled over with drops of this sticky fluid, which, on drying, becomes dark-colored, and greatly disfigures the foliage.

Of all the means that have been employed for the destruction of this insect, that which has proved most efficient, and the one now almost universally practiced, is fumigation with tobacco. Those who use it frequently in greenhouses, procure tobacco stems, when they are readily to be had, on account of their cheapness, or in suitable climates a small crop of it is raised for this purpose; but tobacco in almost any form may be used, and the amount necessary for a stock of house plants is of inconsiderable value. Some plants, such as heliotropes, salvias, lantanas, and some others with soft, downy foliage, will not bear ordinary fumigations without injury to the leaves, and these plants, therefore, should not be subjected to it. Many plants in full flower, but especially pelargoniums, will throw off their expanded blooms after smoking, and therefore it is best to remove them before fumigating. Care should be used also to have the foliage of all the plants dry, for if they are wet or damp, the smoke will be apt to injure such as are of a soft texture. If the plants are in a conservatory attached to the house, the time chosen for fumigating should be a still evening, when there is little or no wind stirring; and the temperature of the house should be pretty well up, as then the insects are more active, and the smoke will more easily affect them. A few chips or a little charcoal may be placed upon a small furnace or a pan and ignited, and then a small quantity of tobacco placed upon it. The tobacco should have been previously dampened, so as to prevent its burning too rapidly or blazing. See that the fire continues to burn, and add more tobacco, if enough has not been placed on at first, until the room is filled with smoke. It can be left this way all night, and in the morning the plants should be well syringed to free them of the dead insects, and to remove the odor of the tobacco. After a few days it is best to repeat the smoking, so as to destroy any insects that may have escaped the first time. In this way fumigation is to be practiced whenever necessity indicates it; but, as we have before remarked, a free use of the syringe and a moist atmosphere will render the necessity of less frequent occurrence.

When only a plant or two, or a small number of them are to be treated, they can be fumigated under an inverted barrel or large box in a back room or shed. Single plants may be fumigated by making a bell of a newspaper. The smoke can be introduced by means of a tobacco pipe. Fill the bowl two-thirds full of quick-burning tobacco, and after lighting, place a piece of cotton cloth over the bowl, and blow the smoke through the stem with the mouth. Instead of fumigation, a weak solution of tobacco may sometimes be used quite as effectively. This is often the more convenient way for a few plants. Soak or steep some tobacco in water until the strength is extracted. The strength of the water is determined by dipping a leaf into it, or letting it remain in it for a short time. If the leaf is brown or burned, or turns so when taken out of the water, the solution is too strong, and must be reduced by increasing the quantity of water. When the right degree of strength is acquired, dip the whole plant into the water, and afterwards syringe it off with clean water. What we desire to impress most forcibly on the minds of our readers, and especially those who keep only a small number of plants in the living rooms, is the better way of watching them so closely, and syringing and washing them so frequently, that the fly is kept under, and the plants maintained in the highest state of health.

Thrips is an exceedingly active little insect, and seems to leap rather than fly. These insects are extremely small, and have long, slender bodies, with very narrow wings, which are fringed with fine hair. They live on leaves, flowers, in buds, and even in the crevices of the bark of plants, but are so small that they readily escape notice, the largest not being more than one-tenth of an inch in length. The color of the insect varies from a whitish yellow to a dark brown. It attacks the extremities of young shoots and tender leaves, which become brown and shriveled, and will crumble to dust when rubbed between the thumb and finger.

The same means that have been recommended for the destruction of the "green-fly" serve for this little pest also, but it does not succumb so readily; the fumigation must be more frequently and persistently practiced. As we have said in reference to the "green-fly," so with this insect: it may be prevented to a great extent from multiplying by syringing and frequently washing the leaves of the plants.

If a vinery should be seriously attacked with thrips, wait until all the foliage and fruit are taken off the vines; then remove all kinds of plants that have green leaves into other houses, and shut up the vinery close, and fill it with the fumes of sulphur.

The red spider (*Acaraus tellarius*) is a troublesome little insect, and one which, if allowed to run unchecked, would speedily bring devastation and total ruin to the plants of the house or conservatory; but it is no doubt designed for some beneficial purpose. We can more clearly see the compensating good from its attacks than in the case of most other plant-preyers. If it were not for the wholesome fear which it continually inspires, gardeners and other plant-growers would probably very frequently maintain an atmosphere so dry as materially to injure or destroy their plants. If you catch a glimpse of a red spider, you may be sure that the atmosphere of your plant room has been kept too dry. If it is your living room, it has also been too dry for the health of the human occupants. The insect is very minute, and the body is of a blood-red color, and the feet a light red.

A plant upon which this insect has taken up his abode, in a short time shows some leaves turning yellow, indicating premature decay. When they are numerous, they work webs on the under side of the leaves, and sometimes all over it, until the plant becomes a mass of half-dead and decayed leaves.

Water is fatal to the red spider, and as before remarked, with an atmosphere of proper humidity this insect would never get a foothold. When once firmly established upon the plants, the speediest way to destroy them is by the fumes of sulphur. This remedy, however, must be used with much caution, as the free use of it will cause most plants to shed their leaves.

Fortunately, but little of it is required, and in the greenhouses it has been found sufficient to mix a little flour of sulphur with water or

with milk, which is said to be better, and to paint or smear with it a small surface of the heating pipes or the flue; a very little of it in the atmosphere proves sufficient for the destruction of the insect. In the case of a few house plants, we think that sponging of the leaves on both sides, and syringing the plants so that the water is thrown on the under as well as upper sides of the leaves, will be effectual without recourse to sulphur.

The coccus, or scale insect, is a common pest on some kinds of plants. The orange, the myrtle, the camellia, the oleander, and many other hard-wooded plants are apt to be infested by them. There are many species of coccus, varying slightly from each other. One kind of plants is the home of one variety, and another sort devotes its attention exclusively to some other kind. The grape, the pear, the elm and almost every kind of our cultivated and forest trees has its special representative of this class of insects.

The remedy in this case is by washing the plant by hand, and forcing the insect off with the thumb or finger-nail; or take a small, stiff brush and soap-buds, and brush the plant until it is thoroughly clean. The name of the species that infests the myrtle, orange, oleander, etc., is *Coccus Hesperidum*.

The mealy bug (*Coccus Adonidum*) is similar to the previously mentioned insect, except that it is covered with a white, mealy or downy substance. Both of them insert their beaks into the bark of leaves, and draw from the cellular substance the sap that nourishes them. A weak mixture of whale-oil soap and water in the proportion of one pound of soap to five gallons of water will be found destructive to them. With a few plants only we would recommend the use of a soft brush and water, and in this way they can be readily removed.—*Vick's Quarterly.*

The Calla Lily.

BY WM. SUTHERLAND.

CALLA lilies and orange and lemon trees must be especial favorites of the fair sex, judging from the innumerable questions asked us by our lady patrons in regard to their cultivation, time of blooming, etc.

Thinking that some of our fair readers would like to have some information on the subject, I give them a few notes below.

The Calla lily (*Richardia Æthiopica*) was first introduced into Europe from Africa, about the beginning of the present century, from which time it has been cultivated with more or less success all over the civilized world, until it has become one of the most popular flowers we have, not only as a window plant, but also as a bouquet flower, thousands of the flowers being used by our bouquet makers annually; in fact, very few large bouquets of any pretensions are now made up without them, and most of our cut-flower growers have a succession of the blossoms the year round, receiving from ten cents to twenty-five cents for each flower, according to the time of year, demand, etc.

There are some four varieties of the Calla in cultivation—two with green foliage, and two with ornamental leaves, besides our own native variety, all requiring about the same treatment, and resembling each other in the shape of the flower, but differing somewhat in size and shade of color. Strictly speaking, what passes for the flower is only the spathe or sheath that envelops the flowers, the true flowers being clustered together on a short stem in the middle of the sheath, those at the base being pistillate, those on the upper portion being staminate.

Richardia Æthiopica, the old Calla lily, grows from two to three feet in height, the leaves being green and the stalks of a brownish color, the sheath pure white on both sides.

Richardia Æthiopica nana, a dwarfer variety of the above. The spathes or sheaths are smaller, and can be more readily used in bouquets, etc.; the same color as the above, alike on both sides, sometimes of a green shade in the centre. This is easily distinguished from the above by its bright green stem.

Richardia variegata grows about one foot in height, its leaves beautifully veined with white. This variety must be extremely scarce, as I have seen it in no other collection besides

that of the late B. A. Fahnestock, of this city.

Richardia alba maculata grows one foot in height, resembling the preceding variety in style of growth, shape, etc. Its leaves are beautifully spotted with long white spots, as if some insect had eaten the green part out in patches. The spathes are small, and shaded with purple in the middle.

Richardia palustris, our native variety, grows about one foot in height. Its leaves are heart-shaped; the spathes, which are white on the upper side, and green on the back, spread away from its clustering flowers. This variety forms no bulb, but can readily be grown from its long and jointed fleshy roots. It also bears a conspicuous cluster of red berries in the fall.

While the Calla lily is not very fastidious as to soil, etc., I have found it to do best in a rich, sandy loam—say about equal parts of loam-sand and well-rotted cow manure. When growing, it should have abundance of water. For this purpose it may be grown in pots standing in pans of water, or its roots entirely or partially submerged. In this way it can be grown in fountains and other bodies of water. When done blooming, it should be dried up until all the leaves fall off. For this purpose the pots containing the plants may be laid down on their sides in any dry place, where, after resting a month or six weeks, the bulbs should be shaken out of the old earth and repotted in fresh soil. Removing all small bulbs and side shoots, reserve only the strong bulbs for flowering. Water sparingly until they begin to grow, when they must have a more copious supply. They generally begin to bloom about four months after being potted. —*Gardener's Monthly.*

Liquid Manure for Pot Plants.

THE beneficial results obtained from manure water, when judiciously applied to fruiting and flowering plants, have long been recognized by cultivators, and its use is now becoming more general. It is well known that the roots of plants are more healthy when growing in pure soil, free from rank manure, and that these roots will draw more healthy nourishment to the plants from manure given in a liquid state, than when they are encased in rank material which they cannot consume. We know that our most successful grape growers use very little solid manure in the soil—only a few bones or bone meal, or similar material, which cannot give off more stimulant than the plants can consume. These will remain much longer in the soil than manure, which dissolves rapidly, and continue their action as a fertilizer to the end.

The successful florist has more faith in giving stimulants when the plant really needs them, than in keeping the roots buried in soil made rich and almost offensive by strong manure. When roots are few, and the plants almost at rest, the purer the soil and the less stimulant the plants receive, the better will they thrive when their roots come to draw up larger supplies of nourishment. Moisture is needed to soften the soil, and to allow the roots to extract nourishment from it; but when all the virtue is out of the earth, and the plants begin to show signs of distress, all the watering in the world will not give vigor to the exhausted functions. But let a portion of guano or any well prepared manure be mixed with the water sufficient to color it, and let this be repeated at every watering instead of giving a much stronger dose at longer intervals, and the result will be most satisfactory. We have tried a number of experiments this season with liquid manure, and all lead us to have faith in the application of it, at every watering, in a weakly state.

A number of old Fuchsias were stunted and pot-bound, but pressure of more important matters prevented our potting them into fresh earth; but to each watering a coloring of guano was allowed, and the plants with their pot-bound roots have not only made vigorous growth, but flowered freely from June until November. Some Pelargoniums, which were cut down last season and allowed to break in the usual way, were shaken out of the pots and placed in smaller ones; but when they should have been shifted, they were allowed to remain in the small pots, which were crammed

with roots. Guano water was given at all times when they required moisture, and the plants grew and made fine foliage, and flowered better than the others which were favored with larger pots and fresh soil. We could give many other examples to prove that giving liquid manure frequently, and not until roots are in abundance to consume it, is the proper way to deal with this important assistant to cultivation.—*Florist.*

Plants for Window Gardens.

IN a recent discussion of this subject, by the Maryland Horticultural Society, Mr. John E. Feast, after referring to the beauties of window gardening, said, the three principal things required to grow plants successfully are light, air and moisture. Light is one of the most important agents in the growth of plants; it strengthens the color and matures the growth of both wood and bloom. In cultivating, place the plants as near the glass as possible. Windows facing the south are always the best. Judicious watering is, perhaps, the most important feature in their management. The last and only general rules that can be adopted are: in winter keep the plants (not then growing) rather dry. In spring increase the quantity of moisture with their activity and the sun's power, keeping them in a medium state. In summer water plentifully, but decrease the supply gradually as cooler weather approaches. Never water a plant without it is dry, and then water thoroughly, so that the soil may get wet to the bottom of the pot. All refuse water should be emptied out of the saucers. Give plenty of air every fine day, but avoid draughts. To grow plants with credit in a window they should be screened from the dry air of the room. This may be done either by a curtain or an inside window. If plants are not screened they will be injured by the gas and dust. Cleanliness is also highly necessary; it may be done by syringing and sponging the leaves, and keeping the plants free from insects. The temperature of the room should be uniform, not lower than forty-five degrees at night, nor higher than seventy-five during the day. In severe weather, when the temperature of the room cannot be regulated, the plants will often have to be removed from the window.

List of Plants.

Pot Geraniums of dwarf habit and fine form.—The following are good: Master Christine, Mademoiselle Nilsson, Christabel, Belle Helene, Leonidas, Black Dwarf, Louis Veuillot, Madame Van Houtte and Bridesmaid.

Best six window plants.—To an inquirer asking for such as are of handsome habit of growth and of long continued flowering during winter, the following are recommended as easy to procure and easy to grow: Chinese Primroses, Zonale Geraniums, Tree Carnations, Heliotrope, if there is light enough, Cyclamens, and the common Abutilon.

Best window foliage plants.—Taking it for granted something very easy to grow and procure is desired: Variegated Veronica Speciosa, or some of the variegated varieties of the shrubby Australian species; variegated Agapanthus umbellatus; Abutilon Thompsoni; Epiphyllum truncatum, grafted; Tradescantia discolor, and Aralia papyrifera.—*Gardener's Monthly.*

A Fine Wistaria.—A contributor of *The Gardener* calls attention to two very fine plants of the *Wistaria Consequana* (*sinensis*) on the grounds of the Rt. Hon. Lord Trevor, M. P., which for three weeks were not equalled for the size and profusion of bloom. They covered a space of wall 56 by 13 feet, and bore upwards of 2,200 racemes of flowers over 12 inches in length. From some of the spurs depended 50 racemes.

Kerosene Oil for Insects.—A correspondent of the *Gardener's Monthly* says the simplest plan to use this substance to destroy insects on plants is to make some moderately strong soap suds and mix a little oil with it. It readily combines with the suds and can be then applied uniformly with a syringe. It is the best thing for mealy bugs and may be used in dilution suited to the nature of the plant requiring treatment.

Editor's Portfolio.

Chinese Fruits.

Long-yen and Li-tchi.—Many Chinese fruits are well adapted to California, especially the sheltered southern and middle portion of the State.

Among these are "Long-gan" or "Long-yen" (*Dimocarpus Longan* and *D. Li-tchi*). Both species are trees, but there are many varieties cultivated in southern China and the East Indian Islands. They differ in the quality of the flesh and time of ripening; also in the shape of the fruit, some being globular, like the Li-tchi, so common on the Chinese fruit stands of San Francisco; others are heart-shaped or oblong, but nearly of the same size. Long-yen is also medicinal.

The twigs are thick and gross, like the Fig, leaves oddly pinnatified, like the Walnut. The fruit is produced in long, loose racemes or clusters, somewhat like an open bunch of very large grapes, usually red when ripe. In one species it continues green. Both Li-tchi and Long-yen are of a uniform light brown color, as they appear sun-dried or oven-dried in our market. In the recent or fresh state it has a leathery coat, rather thin, and inside is a semi-transparent substance, with a dark brown seed in the centre. The flavor of the pulp is slightly sweet, subacid, and particularly pleasant to the taste in a warm climate. It should be remarked that when dried, the pulp is shriveled and reduced to half its usual size. It is eaten with tea, and has a rich taste when well preserved. By the buckle-like or truffle markings of the cinnamon brown surface, and thin, brittle, bladder-like shell, any one will easily recognize it.

The trees bear fruit much sooner when raised from cuttings. If from seed, eight or nine years are required, whereas from cuttings only three or four years.

The best authorities now place these under the earlier genus *Nephelium*—*N. cappaceum*, one of the most ornamental and wholesome.

China Peaches.—Some varieties grow to the height of forty to fifty feet, with fruit of great size. Marco Polo saw a peach in the district of Cang-chew that weighed two pounds. In general, the larger sorts are considered to be of inferior flavor, although some peaches in the Emperor's district are said to be as exquisite and meltingly delicious as the best European. The gardeners have the secret art of preserving the fruit gathered in October until January, as nice in flesh and flavor, and as smooth as in the fresh state. It should be noted that in China peaches are budded upon stocks raised from seed or pits of the choicest varieties. The flat variety flowers in autumn, ripens very early, and with California excess of winter sun would do well.—*Dr. A. Kellogg.*

Cultivating Truffles in France.

Large tracts of land in the south of France, not hitherto cultivated, are being planted with the kind of oak trees beneath which truffles are generally found, and it is expected that each acre of this land, lately sold as low as $25, will yield a crop of truffles worth $100 per year. The experiment has already been tried in the department of the Vaucluse, and in the course of the last twenty years, 150,000 acres, which were absolutely unproductive, have been planted, and are yielding a rich return. The cost of plantation, which is borne by the commune, does not exceed twenty francs per acre on hilly ground, and though rather greater in the lowlands, the crops are proportionately heavier. Acorns only are planted on the hilly ground, but saplings of five or six years' growth, placed in rows about forty feet apart, are found to answer best in the lowlands. The ground between each row of trees is planted with vines, which, after five or six years, repay the cost of the plantation and its culture.

Adiantum Farleyense.

Probably one of the finest examples in the United Kingdom of the beautiful exotic fern, *Adiantum Farleyense*, "The Queen of the Maiden-hair Ferns," was shown at the exhibition of the Stamford Horticultural Society, Sept. 4th. It was staged by Mr. Allsop, gardener to C. T. S. Birch Reynardson, Esq., Holywell Hall, Lincolnshire. Well grown,

very healthy and beautifully colored, this specimen must have measured nearly or quite three feet in diameter; and the boldly arched, elegant fronds gave it a fine symmetrical appearance, which did not fail to excite the admiration of all who saw it. A single frond of this superb fern is a sight to be thankful for; but it is when a large and well grown example of it meets the eye that one seems to fully appreciate and delight in its exquisite beauty and almost unrivaled elegance.—*Gardener's Chronicle.*

Cranberries in Japan.

A young Japanese, while in the United States, expressed much surprise at seeing cranberries eaten at the table, and said that in the mountains of Japan they grew very large and beautiful, but are never cooked. Some old man occasionally goes up to the mountain and picks a long basketful of them, which he brings on his shoulders down to the town. Here the boys gather about him, and for a small coin purchase the right to crowd their pockets with them. And what use do you think they make of this otherwise useless fruit? The boys blow the glowing berries through rattan tubes, as our boys blow beans through tin ones. That's what cranberries are used for in Japan, where they grow to great perfection.

India Rubber Tree in California.

J. P. Rowe, writing to the *California Agriculturist*, gives the following information: In answer to one of your correspondents, who inquired some time ago about India rubber trees, I wish to inform him that they grow as easily here in California as the Blue Gum and Pepper trees. Here are the statistics of one grown at Capt. Wilcox's town residence, San Diego: Age, two years; height, seven feet eight inches; circumference, five inches. It has been in the garden twenty months, and during that time it has grown seven feet.

California Roses.

Santa Barbara now puts in a plea for the largest rose. Less than a year ago, Dr. L. N. Dimmick placed in his grounds a rose plant, the King of Noisettes, Maréchal Niel. This has extended over a trellis arching one of his garden walks. Within the last six days, a shoot some three feet in length has grown from the foot of this trellis. On this stalk, surrounded by half a dozen vigorous buds, hangs to-day the champion rose of the world in size and perfection. The Maréchal Niel is a cupped variety of rose, having a lemon tint, and with a delicate and delightful perfume. This rose is 16¾ inches in circumference; its shorter diameter five inches. The measurement in various directions from tip to top of petals is over six inches! The depth of the rose is fully three inches. This, we claim, is the largest rose on record. Another marvelous thing we noted before leaving the grounds of Dr. Dimmick—113 buds on a rose truss of the La Marque variety. A common felt hat covered the space in which were counted the above number of buds.—*Santa Barbara Press.*

American and European Trees.

A few years ago there appeared in the "Proceedings of the Philadelphia Academy of Natural Science" a paper on the identity of relative characters in numerous allied species of American and European trees, in which it was shown that American trees are comparatively dwarfed in their habit. They have smaller seeds, smaller buds, closer nodes, less regular and less twiggy heads, thinner leaves, deeper seratures and higher autumnal coloring than their near European allies. A European observer has lately added to these notes the fact that American species cast their leaves earlier in the fall than their kindred species in Europe.

To Preserve a Bouquet.

When you receive a bouquet, sprinkle it with fresh water; then put it into a vessel containing some soap-suds, which nourish the roots and keep the flowers as good as new. Take the bouquet out of the suds every morning, and lay it sideways in fresh water, the stock entering first into the water. Keep it there a minute or two, then take it out and sprinkle the flowers lightly by the hand with pure water. Replace the bouquet in soap-suds, and the flowers will bloom as fresh as when gathered. The soap-suds need to be

changed every third day. By observing these rules, a bouquet may be kept bright and beautiful for at least one month, and will last longer in a very passable state; but the attention to the fair but frail creatures, as directed above, must be strictly observed, or "the last rose of summer" will not be "left blooming alone," but will perish.—*American Artisan.*

New Rose.

Duchess of Edinburgh, Crimson Tea.—Most Tea roses are light—a dark one will be welcome. Messrs. Veitch & Son say: "The color is a deep glowing crimson, very free flowering, and from its present appearance we have every reason to believe it will make as good a bedding variety as the Crimson China." The flowers are large and full, fine form and substance.

It was exhibited at the Royal Horticultural Society's Show on May 13th, when it received a first-class certificate from the Floral Committee, and was greatly admired.

Superior Peaches.

We venture the assertion that the recent Fruit Growers' fair in New Orleans had nothing superior to some peaches which were last Saturday presented us by Mr. David Riggs. Taking two of the largest; one weighed nearly, and the other over, nine ounces, and they were ten inches in circumference and almost four inches in diameter. Such mammoth peaches were never before grown in this country. They were of the cling variety, but as sweet and juicy as any peach we ever ate. This should encourage others in peach culture, for he has fully demonstrated that as fine peaches can be grown here as in any country. Four years ago he located on the prairie, and now he has several hundred peach trees in full bearing, some of which are of choice grafted varieties, and he intends hereafter to cultivate only the best. We hope others will follow his example.—*Louisiana Sugar Bowl.*

Notes on Geraniums.

In a corner of my little botanical garden, I planted a circle with Zonale Geraniums, one of a kind of the most promising varieties, merely to test their respective worth. They are now blooming and I find I have too many kinds. Among the scarlets, none surpass the Gen. Grant for profuseness of bloom; it is a poor flower and an open truss, but the color is brilliant. Lucius is grand, but of a lighter shade than the above. Jean Sisley is very fine, as every one knows who cares anything for flowers; its pure white eye making it very conspicuous. Among pinks, Master Christine must take precedence for profuseness of bloom, and decided color. The new White Clipper is a wonderful bloomer, endures the sun well, and is the first really good white that I have yet tested. Among doubles, I like the Gloire de Nancy as well as any other, although none of them yield so many, nor as fine trusses as the single varieties. The new Jewel is a dwarf compact grower with small trusses of extremely double flowers, deep crimson in color; it promises well for the border. In the variegated leaved kinds, I am not aware of anything to surpass that sterling bronze geranium, Gloire de Corbenay, a variety that stands the sun with perfect impunity. For ribbon gardening or for massing, it can have no superior in this locality at least. I had almost forgotten the very beautiful Asa Gray with its exceedingly conspicuous salmon-orange double flowers. It has been one continuous sheet of bloom the entire season, and is abundantly distinct from anything else.—*N. Y. Tribune.*

The Oak-leaved Pelargonium.

The *American Garden* remarks: "From thirty to forty years ago, it was a very common plant, being found in every greenhouse, and, during the flower season, offered for sale at every plant stand in the markets. When it became the fashion to despise old favorites and to cultivate only novelties, this was discarded and disappeared from the catalogues. Through an inadvertence we lost our own, and after seeking another for seven or eight years among our leading florists, we at last found one at an old-fashioned local nursery in New Jersey. We have now grown it for the past eight or nine years with both pleasure and amusement—amusement derived from

witnessing the admiration bestowed upon it by visitors, not so much for its great beauty as for its great novelty. And yet it was cultivated on New York Island at least seventy years ago. As a bedding-out, ornamental foliaged plant, it is equal to any of the finest novelties—few (if any) of which equal its rich bright foilage and luxuriant growth under our scorching sun."

Garden Soil.

I am induced to give my experience and practice for the benefit of those who, like me, have to cultivate a heavy, clammy soil for a garden. Such soil may be put in the best condition when the seeds are planted, but before they germinate sufficient to reach the light and air, so essential to their existence, as is frequently the case, there comes a heavy dash of rain, followed with a hot sun, forming a hard crust impervious to the little delicate plants, too feeble to break through their imprisoning wall. I have had to pick up the rows with an iron tooth rake, or reduce the surface to a fine, loose state again, and plant over. The plan I now adopt entirely obviates such a discouraging difficulty. After putting the ground in the best of condition by deep culture, breaking down lumps and working in a good supply of well rotted manure (none other should be used in a family garden), I rake the surface smooth, over which I spread a compost, prepared for that purpose, about half an inch thick; lightly draw the rake over the covered surface, which mixes the soil and compost. When I prepare large beds I spade a strip three or four feet wide the entire length or breadth, prepare it for the top-dressing, and spread it on, and so on, until finished, by which unsightly footmarks are avoided, if for appearance sake only.—*Cor. N. Y. Tribune.*

The Florists of Ghent.

A correspondent of the *Gardener's Chronicle*, after visiting the extensive green-houses and nursery establishments of Ghent, Belgium, writes of the owners and of the bouquet business as follows:

"The smaller growers are simple, friendly, and frank in their manners, making no pretensions to be greater than they are, and instead of giving themselves professional or social airs, doing their work in rough working costume, and protecting their feet from the damps of the soil by those excellent non-conductors, wooden shoes; which their wives also do not disdain to wear upon occasion. They manifest no wish to keep secret processes which many people might endeavor to conceal. Such details of their art as can be conveyed by telling and showing, they seem perfectly willing to communicate. The real secret of success lies, in fact, not in knowing the way in which a thing is done, but in the practical skill, the perfect manipulation, and the completed experience, acquired by doing it long and frequently. The visitor desirous of seeing how Camellias or Azaleas are propagated; how long they, or other cuttings or grafts are kept *etouffees*, stifled close under double, sometimes triple glass; the mixture of soils, and their renewal, in these hard-cropped, circumscribed nurseries; the practice of cross-fertilization by which, for instance, herbaceous Calceolarias maintain their parti-colored flowers—such knowledge as this, and more, the visitor to Ghent can acquire without difficulty, through the amiable desire of its horticulturists to oblige inquiring strangers. Of course they must see that the inquirer takes a real interest in the matter, and knows something about it, and is not a mere idle lounger, or questioner for questioning's sake. Pretty things and nice specimens are often to be found up amongst them. Their prices, too, are moderate, as most of the trade are well aware; and, like other weak creatures here below, they have no objection to ready money. Probably, they may often act as propagators and providers to the horticultural grandees of the place; but about those business matters a casual visitor has no right to be too inquisitive. They do not really concern him. Enough for him if he be received, as we atways have been, with an affable and ready welcome.

There is a rumor that certain brides refuse to be married without a Vandriessche-Leys bouquet. If they would hold out in their

resolution I cannot tell. Those who want one must apply, not to the back gate, by which we gained admittance, but to No. 87 Rue d'Akkergem. We were shown a handsome specimen, just finished off: nothing but a centre of orange flower buds (end of October), with an outer border of their natural foliage, the whole trimmed, not too staringly, with white satin and real lace.

The bouquet, before completion, passes through several hands, and is composed of several elements. First, the master takes a basket and gathers flowers which he judges suitable for its composition. These he hands to an assistant, who mounts them, separately, by tying them to a top of a dried rush, or other slender and light support. As each flower is mounted he sticks the lower end of each artificial flower-stilt into a box of sand, which thus serves as a pincushion. The arrangement of the bouquet is not his business—though in case of need he might acquit himself fairly—but Madame's, whose taste is supposed to be superior. She has circular cushions of moss ready made and kept in stock; a bunch of box from an edging is sometimes used for small and low-priced bouquets. On one of these moss cushions she arranges the stilted flowers like pins, until the desired arrangement is completed. The whole is then slipped into a cardboard case or holder fringed with real or imitation paper lace, and the thing is done. No engraving, without color, would give an idea of the beauty of the effect produced. That beauty, unfortunately, is short-lived. All that can be done to prolong it is to sprinkle the bouquet's surface with water, and to keep it closely covered in a box during the night. Sticking a mounted bouquet into a jar of water, to preserve it, has been compared to a Chelsea pensioner's putting his two wooden legs into a hot foot-bath to cure a cold."

American Grapes in Europe.

Our state entomologist, Prof. Riley, having returned from a trip to Europe, reports that there is an extensive demand on the part of French vine growers for cuttings of several varieties of our native grapes, including the Taylor, Clinton, Cynthiana, Herbemont and Norton's Virginia. The phylloxera or grape louse has destroyed millions of vines in the most celebrated vineyards of France, and all efforts of the government or of individuals, have proved fruitless to stop the mischief. Prof. Planchon was sent to this country to ascertain how our vines withstand the attacks of this insect. He discovered that a majority of the best sorts of our vines are of such vigorous growth that the louse fails to injure them. Some of these varieties had been sent to France years ago and showed no less vigor there. Hence, the demand for American cuttings as stocks upon which to graft the weaker European varieties. Prof. Riley informs the New York *Sun* that he has seen specimens of American vines in France growing vigorously and apparently perfectly healthy, among the blackened remains of vast numbers of phylloxera-stricken vines. As the phylloxera attacks the roots of the vine principally, the main object of the French vineyardists is to procure American varieties to be employed as stocks; but very likely this course will have to be abandoned when they learn more of our choice vines. Yet the prejudice which prevails in Europe against American vines will have to be broken down before even the best sorts are planted there for their fruit. The *Sun* thinks, however, that our grape growers can expect a large foreign demand for American cuttings, and that eventually some of our varieties will be found to yield an excellent wine when grown without grafting in the south of France. The wine may be a somewhat different flavor from the old standard French grapes, but it need be none the less pure; and we may expect, before another decade has passed, to find French wines made from American grapes, well represented in our own markets.—*Kansas City Times.*

Hardy Roses and Spireas.

A correspondent of the *Prairie Farmer* in Iowa gives notes of his experience in roses, etc.:

Remontant roses are nearly all hardy, when protected with a few inches of leaves or litter.

Among the best of these are the Giant of Battles, Marshal Niel, Aubernon and La Reine. Bourbons are also hardy when laid down and covered with litter, placing some boards over it to keep it down. I have for some years kept Dupelit Thomas, Souvenir de Melmaison, Hermosa, etc., in this way. Noisette, and even Teas, will do equally well if planted on high, dry, well manured land, and covered well with leaves and garden litter.

As a general rule, all these roses are cultivated for late, rather than early blooming. The English of Remontant is, to "rise up," and to succeed well with roses of this sort, they must be kept closely pruned, so they will continually rise up. In autumn trim them close, within four inches of the ground, and cover over with leaves and litter. In spring, clean off the ground, manure well, and cut down the flower shoots when done blooming. This has been our practice for more than twenty years. In ordinary seasons we have an abundance of the most fragrant autumn roses.

The little double, white, rose-shaped spirea is not hardy here, though Reevesii and Billardii, the latter a lilac colored and shaped bloom, both are. Reevesii is best grown in open ground, so as to get as long shoots as possible. In the fall, take up and plant in large pots. Put these in a cold pit covered with glass. Early in March a profuse bloom appears, very desirable for bouquets and wreaths, well deserving the name of "bridal wreath." If left out of doors, many of the long shoots are winter killed, and often a portion of all; the bloom is very scattering, and soon blows off by the spring winds. Grown in this way, this variety of spirea is the most desirable of all.

The Yam.

Speaking of the Brazilian yam, now extensively cultivated in the Gulf States, a correspondent of a Mobile paper writes: These potatoes are the best I have ever seen. They are equally as sweet as the old yam, and on the same land, with same cultivation, will make fully one-third more than any variety I ever saw. They are hardy and keep well during the winter. I have also the red-skin yam, yellow inside, which is certainly the best early kind to be had. They are fully six weeks earlier than any kind obtainable.

Roses.

A London writer says: The best roses, according to scientific rules and the growers' estimation, are not always those which an unlearned visitor, a mere lover of roses, looks at with most delight; there are mysteries of form and fullness which he knows nothing of, but some of the grandest flowers strike every one with wonder. Such a rose is the Marie Van Houtte, which is of a reversed bell shape (like a bell as the ringer jerks it upward for a good peal of joy), of the tea order, its leaves of a pale yellow tint, edged with pink; a supremely lovely flower, with the faintest suggestion of a tulip in it, and a breath of quite peculiar sweetness. The French roses bear away the palm of beauty, and the learned in them tell us they are more beautiful here than in their own country. The Glorie de Dijon, an "old" rose—it has glorified many a land beside its own—is, to our taste, unsurpassed; but the lustrous dark pink of Marie Cointet runs its tender yellow close, and the Eugene Appert is very near the throne.

A Few Puns.

What strawberry is best adapted to gardeners' boys?—*Hoe-Boy.* What sort would suit the Sandwich Islanders? — *Black Prince.* What best suits young collegians? — *Boy Dens.* What would be sought by young pilferers?—*Hook-her.* What one would fill a large measure and count high?—*Knox's seven hundred.*

STRAWBERRIES first made their appearance in the London market this year on the 23d of March. Baskets containing from six to nine strawberries sold at about five shillings.

THERE is an elm tree in Paris that was planted in 1605, in the reign of Henry IV. This year its leaves were as early as those of its younger neighbors.

THE orchards of this country are estimated to occupy 500,000 acres, and contain 20,000,000 trees in various stages of growth.